

pointed out as existing between Darwin's specimens and those from Mergui, are due to difference in age. A specimen I dissected was furnished with ovigerous lamellæ.

In figure 3 I have given a representation of the penis of this species. Whereas the probosciformed organ, except in certain species of *Scalpellum*, is very long, the present species has a very thick and short penis, its tip being pointed and somewhat hooked. Darwin does not describe the penis of this nor of any other species of the genus.

#### DESCRIPTION OF PLATE XIII.

Fig. 1. *Dichelaspis pellucida*, Darwin, side view :  $\times 14$  diam.

Fig. 2. View of a part of the capitulum, to show A & B, the terga, C & D, the occludent segments of the scuta, and a, b, c, the angle the occludent segment of the scutum forms with the handle of the battle-axe-shaped tergum :  $\times 30$  diam.

Fig. 3. Representation of the penis :  $\times 30$  diam.

List of the Shells of Mergui and its Archipelago, collected for the Trustees of the Indian Museum, Calcutta, by Dr. John Anderson, F.R.S., Superintendent of the Museum. By Prof. EDUARD VON MARTENS, M.D., C.M.Z.S.; of the University of Berlin. (Communicated by Dr. JOHN ANDERSON, F.R.S., F.L.S.)

[Read 17th June, 1886.]

(PLATES XIV.-XVI.)

#### INTRODUCTORY REMARKS.

THE following is a list of the species of Mollusca collected by Dr. John Anderson at Mergui and some of the islands of the Tenasserim coast. The species have been determined chiefly by comparison with the shells in the Zoological Museum of the University of Berlin, and by consulting the leading illustrative works of this department of science, the figures of which are here cited, so far as they have been compared with the objects themselves, and may help to secure the determination. Concerning the land and freshwater Mollusca, I have derived very valuable information from Hanley and Theobald's 'Conchologia Indica,' and from G. Nevill's 'Hand-list of the Mollusca of the Indian Museum,' vols. i. (1878) and ii. (1884); also from the paper by A. Gould in

the 'Boston Journal of Natural History,' vol. iv. 1844, which is the first treatise on the land-shells of that country. Besides Reeve's 'Conchologia Iconica,' several conchological publications by R. A. Philippi have been very useful to me in determining the marine shells, as this author mentions and describes various shells collected by his brother, Theodor Philippi, at Mergui, about the year 1846. Descriptions and figures are only given in the few cases of new or very little-known species. In several other cases some remarks are added concerning the more striking and easily observable differences of the species, chiefly if several nearly allied species are mentioned; they are not intended, however, to give a sufficient description, but only to help the memory of the conchologist in the discrimination of those species.

Dr. Anderson noted on the spot the conditions under which many of the species occurred; and his notes I have given *verbatim*. These are very valuable, as they afford an idea of the circumstances under which the animals live, which are of great importance owing to the influence the surroundings of a species exercise in modifying the general external appearance of the shell, a consideration which is as yet not sufficiently known and appreciated in foreign shells. Many of Dr. Anderson's statements, contained in his notes, coincide with my own observations made during a stay of about two years in the Malayan Archipelago. Chiefly on this account, I have arranged the list into several parts, separating the land-, freshwater-, and sea-shells, and have even attempted to make a peculiar division for those which live in mangrove-swamps and at the mouths of rivers, as we there find intermingled at the same spot air- and water-breathing mollusca and species of genera which are generally admitted as marine with others of a more fluviatile character. I am well aware that this division of submarine Mollusca cannot be strictly limited either from the marine or from the fluviatile forms; but it may, nevertheless, be useful to emphasize them in this way, as, otherwise, even the distinction between marine and fluviatile occurrence remains doubtful and arbitrary for some species.

I have also tried to add, for distinction's sake in *italics*, a sketch of the geographical distribution of the single species, by naming the chief localities in which they have hitherto been found; many of these statements are taken from the collections in the Berlin Museum, the rest from the more reliable conchological authors. If hitherto the "habitat" of the species

was unknown (or at least not stated in the standard conchological works), the sign † is added. By this the reader will arrive easily at the following conclusions:—

A. Terrestrial Mollusca: the greater number of the species are either confined to the Tenasserim coast or range only into the next adjacent countries, as Pegu, Arakan, or the Malayan Peninsula. Only the small-sized *Stenogyra gracilis* is spread throughout continental India and the Malayan Archipelago.

B, C. Fluviate and Submarine Mollusca: most of them are wider spread, chiefly in the direction of Siam and the Malayan Archipelago, and are also found in Bengal; but only few range much further to the west.

D. Marine Mollusca: a very considerable number of species range westwards to the shores of Eastern Africa, even into the Red Sea, and eastwards to the Polynesian islands, several southwards to Natal and to the subtropical parts of Australia, and northwards to China and Southern Japan. Only one (*Natica unifasciata*) is stated with tolerable certainty to live also on the west coast of America; and very few (*Octopus rugosus*, *Lima squamosa*, and *Pholas striata*) are known also as inhabitants of the Atlantic; among these are some which are liable to be spread by currents and drift-wood. Several Oriental species, however, are represented in the West Indies by species so nearly allied, that even the specific discrimination remains doubtful (*Littorina scabra*, *L. intermedia*, and *L. angulifera*, *Planaxis pyramidalis* and *P. sulcatus*, and *Asaphis deflorata*).

*List of Shells collected at Mergui and its Archipelago.*

**A. TERRESTRIAL MOLLUSCA.**

**OPERCULATA.**

**1. CYCLOPHORUS AURANTIACUS, Schumacher. (Plate XIV. figs. 1-6, and Plate XV. figs. 1-6.)**

A number of rather large-sized specimens of *Cyclophorus* have been collected, which are very near to one another, but exhibit some differences in the elevation of the spire, the width of the umbilicus, and the colours of the peristome. They form a nearly continuous chain from the flat widely-umbilicated *C. pernobilis*, Gould, to the more turbinated narrowly-umbilicated *C. malayanus*, Reeve; so much so that I dare not venture to

break up this chain into several distinct species, but shall enumerate the different forms as varieties, and quote for each the corresponding figures in published conchological works. The following characters are common to all these forms:—

(1) A prominent, somewhat mammillate apex with moderately deep sutures and moderately vaulted, worn, reddish-brown surface of the upper whorls.

(2) Faint spiral striae, sometimes almost imperceptible, and rather coarse, often wrinkle-like lines of growth on the last two whorls.

(3) The periphery of the shell is slightly keeled at the beginning of the last whorl; this angularity either remains throughout to the aperture, or vanishes altogether in the larger part of the last whorl.

(4) The upper surface of the last two whorls is densely marked with chestnut-brown, more or less dark, only there is a very narrow pale or whitish bandlet just above the periphery; the lower surface of the last whorl is nearly continuously dark brown near the periphery, then the brown is broken up into several narrow bandlets separated by a whitish underground, and the sides of the umbilicus are whitish, with or without brown bandlets.

(5) The peristome thickened, reflected, and in most of the specimens distinctly double; its colour varies from pure yellow to pale scarlet. The aperture is somewhat more broad than high.

(a) *typicus*: depresso, umbilico perlato, subangulato; subcarinatus, subtus maxima ex parte albus, peristomate intense aurantiaco. Diameter major testæ 55–60, altitudo 33–36, aperturæ (incluso peristomate) diameter 28–31, altitudo 27–30 millim. (Pl. XIV. figs. 1, 2.)

*Chemnitz, Conchylien-Cabinet*, vol. ix. figs. 1064, 1065, copied in the new edition by *Küster and Pfeiffer*, *Cyclostoma*, pl. 4. figs. 8, 9. Type of *Annularia aurantiaca*, Schumacher, 1817.

The figures are drawn from a specimen found on *Salang Island* by Capt. John Weber, and preserved in the Zoological Museum of Berlin, for comparison's sake, as specimens of this extreme form have not been found in the localities explored by Dr. Anderson. The locality of the original specimen, described by Chemnitz, cannot be ascertained. Nevill, Hand-list, i. p. 266, mentions it from *Moulmein* and *Pegu*.

(b) *pernobilis*: maximus, subdepressus, umbilico paulum arctiore, subangulatus; subcarinatus, peristomate rufo-aurantiaco. Diam. maj. 69, alt. 47; apert. diam. 39, alt. 35 millim. (Pl. XIV. figs. 3, 4.)

*Cyclostoma pernobile*, *Gould, Boston Journ. of Nat. Hist.* 1844, iv. p. 458, pl. 24. fig. 11, copied in *Pfeiffer & Küster, Cyclost.* pl. 3. fig. 15. —*Cyclophorus aurantiacus*, *Reeve, Conch. Icon.* vol. xiii. pl. i. fig. 3.

King Island. Gould's specimens are from *Tavoy*.

(bb) *Paulo minor*. Diam. maj. 60, alt. 40; apert. diam. 31–34, alt. 30 millim. (Pl. XIV. figs. 5, 6.)

King Island.

Numerous distinct dark spiral bandlets on the lower face, and even within the umbilicus, are to be seen in the figure given by Gould and in the smaller specimens from King Island; they are scarcely perceptible in the larger specimens from King Island.

(c) *Nevilli*: magnus, subturbinatus, umbilico arctiore, rotundatus, periomphalio fusco-fasciolato, peristomate aurantio. Diam. maj. 55–58, alt. 37–41; apert. diam. 30–33½, alt. 29–31 millim. (Pl. XV. figs. 1, 2.)

*Cyclostoma aurantiacum*, *Pfeiffer & Küster, Cyclostoma*, pl. 23. figs. 4, 5. —*Cyclophorus pernobilis*, *Nevill, Hand-list*, i. p. 266 (specimens given to the Berlin Museum); *Theobald & Hanley, Conchologia Indica*, pl. 1. fig. 7.

Sullivan Island. *Salang Island* (Weber).

(d) *Reevei*: mediocris, subturbinatus, umbilico multo arctiore, infra fasciolatus, apertura subcirculari, peristomate aurantio. Diam. maj. 52, alt. 37; apert. diam. 28, alt. 27 millim. (Pl. XV. figs. 3, 4.)

*Cyclophorus speciosus* (*Philippi*), *Reeve, Conch. Icon.* xiii. pl. i. fig. 4.—*C. malayanus* (*Benson*), *Theobald & Hanley, Conch. Ind.* pl. 28. fig. 4. Mergui; King Island, Sullivan Island.

(dd) minor.

Elphinstone Island.

(e) *Andersoni*: minor, subturbinatus, umbilico sat arcto, subangulatus, apertura subcirculari, peristomate rubescente. Diam. maj. 44–48, alt. 31–36; apert. diam. 24–27, alt. 23–25 millim. (Pl. XV. figs. 5, 6.)

*Cyclophorus malayanus* (*Benson*), *Reeve, Conch. Icon.* xiii. pl. i. fig. 2. Much like *C. sublævigatus*, Blanford, in the 'Conchologia Indica,' pl. 37. fig. 4.

Owen Island.

N.B.—*Cyclophorus speciosus*, Philippi, Zeitschr. f. Malacozoolie, 1847, p. 123 (*Cyclostoma*), figured by Pfeiffer & Küster, Cyclost. pl. 25. figs. 1–3; Pfeiffer, Mon. Pneum. i. p. 56, locality unknown, appears to be a species distinct from all these forms, and perhaps the same as that figured in the ‘Conchologia Indica,’ pl. 33. fig. 4, under the name of *aurantiacus*; the figure called *C. speciosus* in this last work, pl. 104. figs. 4 & 7, is again different. The true *C. malayanus*, Bens., from Penang Island, is, according to the figure given by F. Stoliczka in Journ. As. Soc. Bengal, vol. xli. pt. 2, pl. 10. fig. 5, remarkably more conical and elevated than any of the varieties of *aurantiacus* here described.

2. *CYCLOPHORUS OPHIS*, Benson; *Theob. & Hanl. Conchol. Ind.* pl. 144. fig. 6.

Allied to *C. aquila*, Sow., but the peristome very broad.  
Elphinstone Island.

3. *CYCLOPHORUS EXPANSUS*, Pfeiffer, Proc. Zool. Soc. 1851, p. 242; Mon. Pneum. i. p. 65; Pfeiffer & Küster, Cyclostoma, pl. 39. figs. 20, 21; Reeve, Conch. Icon. xiii. pl. v. fig. 18; Conchol. Indica, pl. 2. figs. 3, 4. (Pl. XV. figs. 7, 8.)

Mergui. (Seems confined to the Tenasserim coast.)

In the specimens collected by Dr. Anderson the expansion of the peristome is still broader than in the figures given by Reeve and the Conchol. Ind.

4. *CYCLOPHORUS ZEBRINUS*, Benson.

(a) *typicus*: acute angulatus, peristomate albo.—Benson, Asiat. Journ. v. 1836, p. 355; Pfeiffer & Küster, Cyclost. pl. 34. figs. 21–23; Mon. Pneum. i. p. 71; Conchol. Ind. pl. 2. fig. 2; Nevill, Hand-list, i. p. 268.

King Island. I cannot distinguish the specimens collected on that island from the normal *zebrinus*, which is stated to live on the Khasi hills. *Khasi hills, Bhamo* (Anderson).

(b) *aureolabris*.—Nevill, Hand-list Moll. Ind. Mus. i. p. 268.

Peristome intensely yellow.

Mergui. *Sibsagar* (Peale).

(c) *ambiguus*: minor, obtuse angulatus, costulis spiralibus obsolescentibus, fulvus, infra suturam maculis fuscis et albidis ornatus, subtus fasciolatus, umbilico sat angusto, peristomate albido. Diam. maj. 28, alt. 21; apert. diam. et alt. 15 millim. (Pl. XV. fig. 9.)

Mergui, Owen and Sullivan Islands. Allied to *C. Cantori*, Bens., from Penang Island, in which, however, the last whorl is distinctly more inflated above and below; also *C. Cantori* varies considerably in size at the same locality, for instance, between diam. maj. 21 and 27.

5. *LAGOCHILUS SCISSIMARGO*, Benson; *Blanford, Ann. & Mag. Nat. Hist.* (3) xiii. p. 452; *Conchol. Ind.* pl. 6. fig. 7.

Sullivan Island.

6. *LEPTOPOMA VITREUM*, Chemnitz; *Reeve, Conch. Icon.* xiii. pl. iii. fig. 15.

Uniformly white variety. Diam. 16, alt. 16, apert. 10 millim.

Sullivan Island. Nicobars, Salang, most islands of Maalyan Archipelago.

7. *LEPTOPOMA ASPIRANS*, Benson, *Conchol. Ind.* pl. 6. fig. 4.

Sullivan Island; only a young specimen. Tenasserim and Pegu.

8. *MEGALOMASTOMA (COPTOCHILUS) SECTILABRE*, Gould, *Bost. Journ. Nat. Hist.* 1844, vol. iv. p. 459, pl. 24. fig. 10; *Conchol. Ind.* pl. 7. fig. 3.

King Island. Penang, Perak.

9. *HELTICINA ARAKANENSIS*, Blanford, *Contributions to Indian Malacology*, v. 1865, p. 21; *Conchol. Ind.* pl. 6. fig. 9; Pfeiffer, *Mon. Pneum.* iv. p. 283.

Sullivan Island. Arakan, Pegu, Andaman Islands.

#### STYLOMMAТОPHORA.

10. *NANINA (HEMIPLECTA) RETRORSA*, Gould, *Bost. Journ. Nat. Hist.* 1844, iv. p. 455, pl. 24. fig. 5; Pfeiffer, *Monogr. Heli-ceorum*, i. p. 77, Helix, pl. 110. figs. 4-6; *Conchologia Indica*, pl. 25. fig. 6.

Sinistral, distinctly perforate, the keel blunt in full-grown specimens. Young specimens are comparatively higher than adult ones.

Pataw, Mergui; Elphinstone, Sullivan, King, and Owen Islands. Also collected previously by Rev. Fr. Mason at Tavoy, and by Theod. Philippi at Mergui.

11. *NANINA (ROTULARIA) ANCEPS*, Gould, *loc. cit.* iv. p. 454, pl. 24. fig. 4; Pfeiffer, *Mon. Hel.* i. p. 80, Helix, pl. 88. figs. 8-10; Stoliczka, *Journ. As. Soc. Bengal*, vol. xl. pt. 2, p. 231, pl. 17. figs. 1-3; *Conchol. Ind.* pl. 30. fig. 1.

Sharply carinated, nearly imperforate.

Mergui and Sullivan Island. Tavoy, Moulmein.

12. NANINA (DURGELLA?) HONESTA, *Gould*; *Pfeiffer*, *Mon. Hel.* i. p. 57; *Stoliczka*, *loc. cit.* p. 248, pl. 17. figs. 6-14; *Conchol. Ind.* pl. 90. fig. 10.

Sullivan Island, Owen Island. *Moulmein, Arakan.*

13. MACROCHLAMYS RESPLENDENS, *Philippi*, *Zeitschr. f. Malakozool.* 1846, p. 192; *Pfeiffer*, *Mon. Hel.* i. p. 56, *Helix*, pl. 110. figs. 7-9; *Conchol. Ind.* pl. 51. fig. 4; *Godwin-Austen*, *Land-Moll. of India*, iv. pl. 26. fig. 1.

Zediwon, near Mergui, Sullivan Island, King Island. *Mergui* (Th. *Philippi*), *Salang* (*Weber*), *Bhamo* (*Anderson*).

14. MACROCHLAMYS ACERRA, *Benson*; *Pfeiffer*, *Mon. Hel.* v. p. 100; *Conchol. Ind.* pl. 51. fig. 2.

Mergui, King Island, Owen Island. Hitherto only known from Mergui.

15. MACROCHLAMYS CONVALLATA, *Benson*; *Pfeiffer*, *Mon. Hel.* iv. p. 46; *Novitat. Conchol.* pl. 36. figs. 14-16; *Conchol. Ind.* pl. 88. figs. 2, 3.

Recognizable by the very narrow whorls.

Mergui, Sullivan and Owen Islands. *Tenasserim and Pegu.*

16. MACROCHLAMYS PANSA, *Benson*; *Pfeiffer*, *Mon. Hel.* iv. p. 28; *Novitat. Conch.* pl. 36. figs. 11-13; *Conchol. Ind.* pl. 56. fig. 1.

Upper surface rather flat and somewhat costulated.

Sullivan Island. *Ava, Prome.*

17. HELIX (PHILIDORA\*) GABATA, *Gould*, *loc. cit.* iv. p. 454, pl. 24. fig. 9 (1844); *Reeve, Conch. Icon.* vii. *Helix*, pl. 127. fig. 766; *Conchol. Ind.* pl. 14. fig. 4 (not good).

*Helix merguiensis*, *Philippi*, *Zeitschr. f. Malakozool.* 1846, p. 192; *Pfeiffer*, *Mon. Hel.* i. p. 397, *Helix*, pl. 106. figs. 7-9; *Reeve, Conch. Icon.* vii. pl. 176. fig. 1205; *Conchol. Ind.* pl. 14. fig. 7.

Mergui, King Island. *Tavoy.*

A very similar species lives on the northern and eastern part of the island of Celebes; it has been identified with *H. gabata* by H. Adams (Proc. Zool. Soc. 1865, p. 408); but by comparing the specimens collected by Dr. Anderson with those collected by Mr. Staudinger, and named *H. pilisparsa* by me (Sitzungsberichte d. Gesellsch. naturf. Freunde in Berlin, 1885, p. 192), I find the following differences:—

\* J. de Morgan, "Moll. terr. et fluv. de Perak," in Bull. Soc. Zool. de France, 1885, x. p. 384, a paper with which the author became acquainted whilst this list was in the press.

<i>H. gabata.</i>	<i>H. pilisparsa.</i>
Mergui.	Minahassa.
Diam. maj. 18–20½, alt. 9–10 millim.	Diam. maj. 23, alt. 10.
The upper whorls rising each a little above the following.	The three upper whorls not rising one above the other.
Pale horn-colour, the keel somewhat darker brown, also in the last whorl; no peculiar coloration of the suture.	Pale greenish grey, the suture marked with a chestnut-brown band, the keel of the last whorl of the same colour as the rest of the shell.
Reflected part of the peristome narrow, about 1 millim.	Reflected part of the peristome broad, about 2 millim.
Umbilicus with nearly perpendicular walls.	Umbilicus with more sloping walls.

*Helix pilisparsa* is beset with short hairlets on its upper and lower face. Gould mentions no hairs in his description of *H. gabata*; and Anderson's specimens have no hairs, but they are all somewhat worn, and they show some roughness, which may be due to the presence of hairs in the fresh state. Philippi describes his *H. merguiensis* as "pilos sparsis brevibus obsita."

18. *BULIMUS (AMPHIDROMUS) ATRICALLOSUS*, *Gould, loc. cit.* (1844) vol. iv. p. 457, pl. 24. fig. 3; *Reeve, Conch. Icon.* v. Bul. pl. 31. fig. 188; *v. Martens, Ostasiat. Landschnecken*, p. 77.

*Bulimus perversus*, var., *Pfeiffer, Mon. Hel.* iii. p. 309, *Bulimus and Achatina*, pl. 40. figs. 10, 11.

Mergui forest and King Island. 17 dextral and 4 sinistral specimens have been collected. *Tavoy, Salang (Weber), Penang.*

19. *STENOZYRA GRACILIS*, *Hutton, Journ. As. Soc. Bengal*, iii. p. 84 (*Bulimus*); *Pfeiffer, Mon. Hel.* ii. p. 157; *Reeve, Conch. Icon.* v. *Bulimus*, pl. 69. fig. 495; *v. Martens, Ostasiat. Landschnecken*, p. 375, pl. 22. fig. 13, pl. 19. fig. 5; *Conchol. Ind.* pl. 23. fig. 4.

Mergui.

Widely distributed from *Cisgangetic India* to *Amboina* and *Timor*, probably sometimes transported by human agency with vegetables, earth, &c.

20. *CLAUSILIA (OOSPIRA) PHILIPPIANA*, *Pfeiffer, Zeitschr. f.*

*Malakazool.* 1846, p. 69; *Mon. Hel.* ii. p. 423; *Küster, Monogr. of Clausilia*, pl. 11. figs. 7-9; *Conchol. Ind.* pl. 118. fig. 10.

Sullivan Island. *Mergui* (Th. Philippi).

20 A. *CLAUSILIA ANDERSONIANA*, *Möllendorff, Journ. As. Soc. Beng.* vol. li. pt. 2, p. 12, pl. 1. fig. 12.

"Nearly related to *Cl. insignis*, Gould, of the same province." *Mergui* (Nevill & Möllendorff).

21. *STREPTAXIS SOLIDULUS*, *Stoliczka, Journ. As. Soc. Bengal*, xl. pt. 2, p. 166, pl. 7. fig. 10; *Pfeiffer, Mon. Hel.* vii. p. 493; *Conchol. Ind.* pl. 98. fig. 7.

Sullivan Island. *Moulmein*.

22. *SUCCINEA SEMISERICA*, *Gould, Proc. Bost. Soc. Nat. Hist.* ii. 1846, p. 100; *Pfeiffer, Mon. Hel.* iii. p. 10; *Conchol. Ind.* pl. 67. figs. 2, 3.

*Mergui. Tavoy, Moulmein, Rangoon, Arakan, Bengal.*

## B. FRESH WATER MOLLUSCA.

23. *PALUDINA DIGONA*, *Blanford, Proc. Zool. Soc.* 1869, p. 445; *Conchol. Ind.* pl. 115. fig. 7.

Perhaps only a variety of *P. bengalensis*, Lam. (see Nevill, *Hand-list*, vol. ii. p. 22), from which it is only distinguished by smaller size and by the two blunt keels continued also on the last whorl.

Rangoon. *Tavoy, Moulmein, Pegu.*

24. *AMPULLARIA CONICA*, *Gray, var. EXPANSA*, *Nevill, Hand-list Moll. Indian Mus.* ii. p. 5.

*Ampullaria paludinoides* (*Cristofori Philippi* from *Mangalore*), *Conchol. Ind.* pl. 114. fig. 5.

Rangoon, with the preceding. *Pegu.*

25. *NERITINA (NERIPTERON) AURICULATA*, *Lamarck in Encycl. Méthodique, Vers*, pl. 455. fig. 6; *Hist. Nat. Anim. s. Vert.* ed. 1, vi. p. 106, ed. 2, viii. p. 572; *Quoy & Gaimard, Voy. 'Astrolabe,' Atlas Zool.* pl. 65. figs. 6-8; *v. Martens, Neritina*, p. 30, pl. 6. figs. 13-15.

Sullivan Island, in fresh water. Fresh specimens marked with dark radiating bandlets. The species is widely distributed from *Ceylon* to the *Philippines*, *Moluccas*, and *New Ireland*; and lives elsewhere also in brackish water.

26. **NERITINA** (CLITHON) *BREVISPINA*, *Lamarck, Hist. Nat. Anim. s. Vert.* ed. 1, vol. vi. p. 185, ed. 2, vol. viii. p. 572; *Sowerby, Thesaur. Conch.* vol. ii. pl. 110. figs. 45, 51, 52; *Reeve, Conch. Icon.* vol. ix. *Neritina*, pl. vi. fig. 28; *v. Martens, loc. cit.* p. 156, pl. 17. figs. 1-4.

King Island Bay, rocks in fresh water. Widely distributed from the Nicobar Islands to New Caledonia.

Var. *MUTICA* (without spines), *Sowerby, Thes. Conch.* ii. pl. 110. fig. 48; *v. Martens, loc. cit.* figs. 2, 3.

*Neritina subgranosa*, *Sowerby, Conchol. Illustr.* no. 41, fig. 14; *Thesaur. Conch.* ii. p. 524, pl. 110. fig. 35; *Reeve, Conch. Icon.* ix. *Ner.* pl. v. fig. 24.

On rocks, freshwater, Sullivan and King Island, with the preceding.

27. **NERITINA** (CLITHON) *AVELLANA*, *Récluz, Revue zoologique*, 1842, p. 76; *Sowerby, Thesaur. Conch.* ii. p. 527, pl. 109. figs. 9, 10; *Reeve, Conch. Icon.* ix. *Ner.* pl. xiv. fig. 64; *v. Martens, Monogr. Neritina*, p. 174, pl. 18. figs. 5-9, & 11, 12.

Sullivan Island, with *N. auriculata* and *N. brevispina*, var. *mutica*.

The coloration is somewhat variable, yellowish or reddish or greenish, with scattered pale spots; some specimens also with interrupted dark bands.

*Borneo, Philippines, Formosa.*

Some other species of *Neritina*, see below nos. 56-59.

28. **UNIO MARGINALIS**, *Lamarck, Hist. Nat. Anim. s. Vert.*; *Reeve, Conch. Icon.* xvi. *Unio*, fig. 297; *Conchol. Ind.* pl. 43. fig. 2.

Rangoon. *Bengal.*

29. **CYRENA PROXIMA**, *Prime, Annals of the Lyceum of Nat. Hist. of New York*, viii. 1864, p. 85, with woodcut.

Sullivan Island, fresh water. *Salang* (Weber), *Siam*.

### C. SUBMARINE MOLLUSCA.

The estuaries of the rivers and the mangrove-swamps nourish a certain number of peculiar species of Mollusca, some of which are air-breathing, others truly aquatic; but all may be found at the same spot and are quasi-intermediate between the freshwater and truly marine fauna.

## a. PULMONATA.

## AURICULIDÆ.

30. PYTHIA PLICATA, Férrussac, *Prodrome Tabl. Moll. Terr.* p. 101, no. 2 (Scarabus); Küster, *Monogr. Auriculacea*, p. 9, pl. 1. figs. 3, 4; Pfeiffer, *Mon. Auricul.* p. 76; Reeve, *Conch. Icon.* xii. Scarabus, fig. 23.

Rangoon, Zediwon near Mergui in mangrove-swamps. Among decaying vegetation flooded at spring-tides, King Island; on trunks of mangrove-trees, King Island. Found also in Bengal, the coast of Coromandel, Rangoon, Moulmein, Pulo Penang, and Siam.

31. PYTHIA TRIGONA, Troschel, *Archiv f. Naturgeschichte*, 1838, p. 207, pl. 4. fig. 3; Reeve, *Annals & Mag. Nat. Hist.* 1st ser. vol. ix. 1842, p. 219, pl. 4. fig. 2; Küster, *Auricul.* pl. 1. fig. 6; Pfeiffer, *Mon. Auricul.* p. 75; A. Adams and Reeve, *Voy. of the 'Samarang,' Moll.* p. 56, pl. 14. fig. 12; Reeve, *Conch. Icon.* xii. Scarabus, fig. 22.

Still more compressed and comparatively shorter than the preceding.

Thapo, King Island; Sullivan Island. Ceylon, Rangoon, Bin-tang, Borneo, Luzon.

32. CASSIDULA AURIS-FELIS, Bruguière, Pfeiffer, *Mon. Auricul.* p. 118; Küster, *Auricul.* p. 13, pl. 4. figs. 9, 10, copied from Chemnitz, *Conch.-Cab.* ix. pl. 121. figs. 1043, 1044.

Auricula fusca, Hombron et Jacquinot, *Voy. au Pôle Sud, Moll.* pl. 9. figs. 7-0; Reeve, *Conch. Icon.* xx. Auricula, pl. iv. fig. 25.

Mergui, on mud-flats; King Island, mangrove-swamps; Kis-seraing Island. Widely distributed in the Malayan Archipelago (Java, Moluccas, Philippines).

33. CASSIDULA BENSONI, Pfeiffer, *Novitat. Conchol.* i. pl. 12. figs. 17, 18; *Mon. Auricul.* p. 111.

Recognizable in fresh state by vertical rows of stout hairs.

Elphinstone Bay. Port Canning, Singapore, Amboina, Luzon.

34. AURICULA JUDÆ, L., Pfeiffer, *Monogr. Auricul.* p. 130; Woodward, *Man. Moll.* pl. 12. fig. 35; Reeve, *Conch. Icon.* xx. pl. iii. fig. 16, &c.; Souleyet, *Zool. of the Voy. of Bonite*, ii. p. 515, pl. 29. figs. 19, 20 (living animal).

Very variable in form and size ; largest specimen 60 millim. long.

King Island and Kisseraing Island, Mergui. *Port Canning, Arakan, Penang, Andamans, Singapore.* Widely distributed in the Malayan Archipelago, extending to the Philippines and Northern Australia.

35. AURICULA (AURICULASTRA) SUBULA, Quoy and Gaimard, Voy. 'Astrolabe,' *Moll.* ii. p. 171, pl. 13. figs. 39, 40; Adams and Reeve, Voy. 'Samarang,' *Zool.* pl. 14. fig. 15, copied Adams, *Gen.* pl. 82. fig. 1; Reeve, *Conch. Icon.* xx. pl. ii. fig. 12; v. Martens, *Moll. Mauritius*, p. 207.

Mergui, on mud-flats. *Port Canning.* Throughout the Malayan Archipelago to New Ireland.

36. MELAMPUS CEYLONICUS, Petit, *Proc. Zool. Soc.* 1842, p. 202; Pfeiffer, *Mon. Auricul.* p. 31.

King and Elphinstone Islands. Nearly one-coloured specimens. *Ceylon, Bombay.*

#### ONCHIDIIDÆ.

37. ONCHIDIUM VERRUCULATUM, Cuvier, Semper, *Reisen im Archipel der Philippinen*, vol. iii. 1877, p. 255, pl. 21. fig. 1, pl. 22. figs. 3, 4; Bergh, *Zool. Challenger*, vol. x. p. 148, pl. 8. fig. 14.

Dorsal tubercles rounded, rather large, nearly equal, some on the hinder part compound, brush-like ; eye-spots in small groups on retractile tubercles. Colour above grey or greyish brown, with few scattered black spots ; below pale, one-coloured.

Owen Island, littoral. *Red Sea, Nicobars, Moluccas, Timor, Australia, Japan.*

38. ONCHIDIUM TIGRINUM, Stoliczka, *Journ. As. Soc. Bengal*, vol. xxxviii. pt. 2, 1869, p. 105, pl. 15. fig. 2.

Dorsal tubercles very small and numerous, not crowded, intermixed with some larger ones, which are sometimes very long and soft ; some with eye-spots. Colour above brown, marbled with large black spots, which are often confluent in a longitudinal direction ; below pale yellow ; only the head grey or nearly black. Also in this species the dorsal eye-spots are grouped to 2-3 on large retractile tubercles, as in the preceding and the following species.

Sullivan Island. *Port Canning.*

39. ONCHIDIUM CORIACEUM, *Semper, loc. cit.*

Dorsal tubercles small, unequal; eye-spots in small groups. Colour above brown, with very large black patches, one longitudinal in the median line; under surface of the mantle blackish. Mantle rather rigid.

Sullivan Island, highest "level of beach." *Nicobars, Singapore, Siam, Philippines, Moluccas, Australia.*

## AMPHIBOLIDÆ.

40. AMPULLARINA BURMANA, *Nevill, Journ. As. Soc. Bengal, 1867, pl. 2. figs. 7-10.*

Mergui, on mud-flats. *Mouth of the Irawaddi, Pegu, Bombay.*

## b. PECTINIBRANCHIA AND SCUTIBRANCHIA.

## COLUMBELLIDÆ.

41. COLUMBELLA (PUSIOSTOMA) DUCLOSTIANA, *Sow., Reeve, Conch. Icon. xi. pl. xv. fig. 76.*

Mergui, mud-flats, in society with *Neritina crepidularia*. King and Elphinstone Islands.

This is the only species of Rhachiglossate proboscidiferous Gastropods; its dull-brown colour differs remarkably from that of other *Columbellæ*, and agrees more with that of the inhabitants of brackish water. *Malacca, Singapore.*

## CERITHIIDÆ.

42. CERITHIUM PATULUM, *Sow. Thes. Conch. vol. ii. p. 871, pl. 179. fig. 74; Reeve, Conch. Icon. xv. pl. v. fig. 33.*

*Cerithium gibberosum, Dunker, Moll. d. Novara Exped. pl. 1. fig. 7.*

Recognizable by a strong rough varix on the back of the last whorl opposite to the aperture.

Mergui, King Island Bay, littoral. Elphinstone Island Bay, on trunks of mangrove-trees; Kisseraing Island. *Singapore, Celebes, Moluccas, Philippines, Carolines.*

43. POTAMIDES (CERITHIDEA) OBTUSUS, *Sow., Kiener, Species d. Coq., Cerithium, pl. 29. fig. 2; Hombron & Jacquinot, Voy. Pôle Sud, Moll. pl. 23. fig. 3; Reeve, l. c. xv. Cerithidea, pl. i. fig. 4.*

Mergui, King Island Bay, on mangroves. *Nicobars?, Salang, Singapore, Celebes, Caroline Islands.*

44. POTAMIDES (CERITHIDEA) QUADRATUS, Sow., Reeve, Conch. Icon. xv. Cerithidea, pl. i. fig. 5.

King Island. *Salang, Malacca, Singapore.*

45. POTAMIDES (CERITHIDEA) FLUVIATILIS, Potiez and Mi-chaud, Galérie d. Moll. pl. 31. figs. 19, 20; Kiener, Cerithium, pl. 29. fig. 3; Reeve, Conch. Icon. xv. Tympanotonos, pl. ii. fig. 9.

*Murex cingulatus*, Gmelin, Chemnitz, Conch. Cab. vol. iv. fig. 1492, is probably the same species.

Mergui, King Island Bay, littoral; Elphinstone Island, on trunks of mangrove-trees and on sand below them, immediately below high-water mark; Sullivan Island, 4 fathoms; Sullivan, high-water mark. *Salang, Singapore.*

46. POTAMIDES (CERITHIDEA) ALATUS, Philippi, Abbildungen, Cerithium, pl. 1. fig. 11.

Very near *Cerithium micropterum*, Kiener.

Mergui, mud-flats; Kisseraing Island; Laloon Bay, Elphinstone Island. *Madras.*

47. PLANAXIS PYRAMIDALIS, Gmelin, Chemnitz, Conch.-Cab. vol. iv. figs. 1170, 1171; Reeve, Conch. Icon. xx. pl. i. fig. 4; Quoy & Gaimard, Voy. 'Astrolabe,' Moll. pl. 33. figs. 25-29.

Ngā Islet in King Island Bay, in grass at the spring-tide level; Owen and Sullivan Islands. *Red Sea, Zanzibar, Mauritius, Seychelles, Tranquebar, Ceylon, Salang, Penang, Singapore, Celebes, Philippines, Vanikoro, New Caledonia.*

Very near *P. sulcatus*, Born, from the West Indies.

#### LITTORINIDÆ.

48. LITTORINA SCABRA, L., Rumph. Amboinsche Rariteitkamer, p. 98, pl. 29. fig. Y (Buccinum foliorum); Philippi, Abbild., Lit. pl. 5. figs. 3-5; Reeve, Conch. Icon. vol. x. Littorina, pl. v. fig. 21.

Mergui, King Island, mangrove-swamps; Cruro islet, between King Island and Hayes Island, on mangrove-trees flooded at spring-tides; Elphinstone Island, on stems of mangrove-trees at high-water level; Sullivan Island. *Zanzibar, Mauritius, Seychelles, Ceylon, Salang, Singapore, Moluccas, New Guinea, Tonga.*

49. LITTORINA INTERMEDIA, Philippi, Abbildungen, Lit. pl. 5. figs. 8, 9 (not Reeve, Conch. Icon. x. pl. xviii. fig. 101).

Near to the preceding; but the last whorl quite round, without keel, and of smaller size.

Mergui, mud-flats; King Island; Elphinstone Island Bay, on

mangrove-trunks ; Kisseraing. *Red Sea, Natal, Madagascar, Maldives, Ceylon, Nicobars, Mergui, Philippines, Samoa Islands, Tahiti.*

50. LITTORINA MELANOSTOMA, Gray, *Philippi, Abbild.*, Lit. pl. 5. fig. 16 ; Reeve, *Conch. Icon.* x. pl. ix. fig. 45.

Mergui, King Island Bay, in grass and on mangrove-trees at spring-tide level. *Ceylon, Singapore, Borneo.*

51. LITTORINA RUBROPICTA, n. sp. (Pl. XVI. fig. 2, *a-f.*) Testa elato-conica, solida, anfractibus plano-declivibus, spiratim sulcatis, ultimo ad basin carina crassiuscula prominula cincto ; pallide flava, strigis sanguineis rectis vel obliquis, interdum interruptis picta ; apertura parviuscula, margine columellari sat dilatato. Long. 18, diam. 11 ; aperturae long.  $9\frac{1}{2}$ , diam. 6 millim.

Number of the spiral furrows on the last whorl between the suture and the keel 7-9, on the base 10-12 ; keel in some specimens subnodulose.

King Island Bay, in grass and on mangrove-trees flooded at spring-tides.

*L. conica*, Philippi, *loc. cit.* vol. iii. p. 9, pl. 6. figs. 1, 2, and Reeve, *l. c. x. pl. viii. fig. 36*, Nevill, Hand-list, ii. p. 149, found by Th. Philippi at Mergui, appears to be very near to this variety ; but is described as being a thin shell, and its colours are different. The variety of *L. carinifera* figured by Philippi, *loc. cit.* pl. 5. fig. 24, agrees very much with our specimens. *L. arboricola*, Reeve, *l. c. x. pl. vi. fig. 27*, is quasi-intermediate between this species and *L. scabra*.

#### PALUDINIDÆ.

52. STENOHYRA MONILIFERA, Benson, *Annals & Mag. Nat. Hist.* (2) xvii. 1856, p. 497 ; *Conchol. Indica*, pl. 37. fig. 4 ; Nevill, *Hand-list*, ii. p. 44.

Mergui, on mud-flats in society with *Assiminea* and *Ampullaria*. *Tavoy.*

#### ASSIMINEIDÆ.

53. ASSIMINEA BREVICULA, Pfeiffer (Hydrocena), *Mon. Pneum.* ii. *Suppl.* p. 156 ; Nevill, *Journ. As. Soc. Bengal*, vol. I. pt. 2, 1881, p. 159, pl. 7. figs. 6, 6a ; *Hand-list*, ii. p. 67.

*Assiminea miniata*, v. Martens, *Ann. & Mag. Nat. Hist.* 1866, 3rd ser. vol. xvii. p. 204.

Recognizable by its bright red colour and an impressed line below the suture.

Mergui, on mud-flats, with the preceding. *Irawady delta, Arakan, Andamans, Malacca, Singapore, Borneo, Philippines, Amoy.*

#### NERITIDÆ.

54. NERITA LINEATA, *Chemnitz, Reeve, Conch. Icon.* vol. ix. Nerita, pl. iii. fig. 13; *Hombron & Jacquinot, Voy. Pôle Sud, Moll.* pl. 17. figs. 23–25; *Tenison-Woods, Proc. Linn. Soc. of N. S. Wales*, vol. v. 1880, p. 120; *v. Martens, Monogr. of Nerita*, p. 15, pl. 4. figs. 12–15.

Mergui, mud-flats; King Island; Elphinstone Island, on sands immediately below high-water mark, on mangrove-trees; Crow Islet between King and Hayes Islands, high-water level; Kisseraing Island.

Ranges from Mergui and the Nicobars to North-eastern Australia and Viti Islands. *Mergui, Nicobars, Penang, Singapore, Siam, Philippines, Northern Australia, Samoa and Viti Islands.*

55. NERITA PLANOSPIRA, *Anton, Verzeichniss der Conchylien*, 1839, p. 30; *Philippi, Abbildungen, Nerita*, fig. 1; *v. Martens, Nerita*, p. 23, pl. 4. figs. 4–7.

Nerita atropurpurea, *Récluz, Revue Zool.* 1841, p. 107; *Journal de Conchyliologie*, i. pl. 11. fig. 3; *Reeve, l. c. ix.* pl. viii. fig. 38.

Elphinstone Island Bay, on mangrove-trunks. *Nicobars, Singapore, Java, Celebes, Moluccas, West Australia, Philippines, Samoa Islands, Carolines.*

56. NERITINA (DOSTIA) CREPIDULARIA, *Lam. Hist. Nat. Anim. s. Vert.* ed. 1, vi. p. 185, ed. 2, viii. p. 572; *Sowerby, Conchol. Illustr.* Neritina, fig. 25; *Thes. Conch.* ii. pl. 113. figs. 139–144; *Reeve, Conch. Icon.* vol. ix. Neritina, pl. viii. fig. 38; *v. Martens, Monogr. Neritina*, p. 37, pl. 7. figs. 1–14.

Rangoon; Mergui, mud-flats; Elphinstone Island Bay, sand-flats; Sullivan Island, highest tide-level, and tidal stream; Kisseraing Island.

The variety with blackish-coloured aperture (*N. cornu-copiae*, Benson, *N. melanostoma*, Troschel) has been found intermingled with typical red-coloured specimens at three of these localities: Mergui, Elphinstone Island Bay, and Kisseraing Island. At

Mergui this species lives associated with *Nerita lineata* and *Columbella Duclosiana*. *Bengal, Tranquebar, Mergui, Singapore, Bangkok, Java, Borneo, Celebes, Philippines, Japan.*

57. *NERITINA* (DOSTIA) GUERINII, *Récluz, Revue Zool.* 1841, p. 314; *Sowerby, Thesaur. Conch.* ii. pl. 111. fig. 272.

A pretty little shell, shining blackish with white spots.

*Mergui, mud-flats, associated with Assiminea brevicula; King Island. Sumatra.*

58. *NERITINA* (CLITHON) SOWERBYANA, *Récluz, Proc. Zool. Soc.* 1842, p. 174; *Sowerby, Thes. Conch.* ii. pl. 109. figs. 5-8; *Reeve, Conch. Icon.* ix. pl. xx. fig. 89, a-d; *v. Martens, Monogr. Neritina*, p. 172, pl. 18. figs. 1-4.

*King Island, littoral; and Elphinstone Island Bay.*

This species was hitherto not known so far westward, its geographical distribution ranging from *Southern Japan* and *China* to the *Gulf of Siam* and the *Philippines*. At *Hongkong* I have found it also in sea-water, in company with *Littorina*.

59. *NERITINA* (CLITHON) UALANENSIS, *Lesson, Voy. de la 'Coquille,' Zool.* p. 379; *Reeve, l. c. ix. pl. xxxvi. fig. 168; v. Martens, Monogr. Neritina*, p. 193, pl. 20. figs. 1-24.

*Neritina Mertoniana, Récluz, Proc. Zool. Soc.* 1843, p. 71; *Sowerby, Thes. ii. figs. 242-246.*

A handsome little species, resembling somewhat *N. virginea*, L., from the West Indies, but essentially distinct in the operculum; extremely variable in colours, usually ornamented with very fine dark lines on a shining greenish ground.

*Elphinstone Island, immediately below high-water mark, on sand; King Island; Sullivan Island, highest water-mark.*

Widely distributed, extending from *Madras* and *Ceylon* to *Southern Japan*, the *Carolines*, *Viti Islands*, and *Northern Australia*. Commonly found in brackish water.

### c. BIVALVIA.

#### OSTREIDÆ.

60. *OSTREA CUCULLATA*, *Born, Testacea Musei Cæs. Vindob.* 1780, pl. 6. figs. 11, 12; *Reeve, Conch. Icon.* xviii. pl. xvi. fig. 34.

Shape of the shell very variable, often wrinkled and angular; size ordinarily rather small; substance solid, white; edges blackish

blue. Fixed on shells, stones, &c.; encrusting the rocks below high- and low-water levels.

Elphinstone Island Bay, and on sand below mangrove-trees. Widely distributed in the Indian seas. *Red Sea, Mozambique, Ceylon, Siam, Sumatra, Timor, Moluccas, Philippines.*

61. *OSTREA MYTILOIDES*, Lam., Rumph. *Amboin. Rariteit-Kamer*, pl. 46. fig. O; Reeve, *Conch. Icon.* xviii. pl. ii. fig. 3.

Of oblong flat shape. Ordinarily fixed on wood.

Elphinstone Island Bay, on stems of mangrove-trees. *Ceylon, Moluccas.*

62. *OSTREA NIGROMARGINATA*, Sowerby, *Reeve, l. c.* xviii. pl. 33. fig. 85.

Very flat and thin, inside white in the centre, dark violet at the periphery.

Elphinstone Island Bay, on the trunks of mangrove-trees. *Arakan.*

63. *OSTREA ECHINATA*, Quoy and Gaimard, *Voy. 'Astrolabe,' Zool.* iii. p. 155, pl. 76. figs. 13, 14.

*Ostrea spinosa* (by mistake from the French name "épineuse" in the volume cited above), Reeve, *Conch. Icon.* xviii. pl. xxx. fig. 79.

Small, rather flat, beset with blunt blackish spines.

Elphinstone Island Bay, with the preceding on mangrove-trunks. *Amboina.*

64. *OSTREA (ALECTRYONIA) FOLIUM*, L., Rumph. *Amboinsche Rariteit-Kamer*, pl. 47. fig. A; Chemnitz, *Conch.-Cab.* vol. viii. figs. 662-666; Lamarck, *Hist. Nat. Anim. s. Vert.* ed. 2, vii. p. 232; Reeve, *Conch. Icon.* xviii. pl. xviii. fig. 40.

Elongated, sharply plaited, yellowish brown or reddish; one valve fixed by peculiar brackets to mangrove-branches.

King Island Bay. *Moluccas.*

#### LUCINIDÆ.

65. *LUCINA (ANODONTIA) EDENTULA*, L. (Venus), Philippi, *Zeitschr. f. Malak.* 1845, p. 180; *Abbildungen*, vol. ii. Lucina, pl. 1. fig. 1.

? *Lucina Philippiana*, Reeve, *Conch. Icon.* vol. vi. pl. v. fig. 23 (not good).

Shell thin, convex, rounded before and behind, with unequal strong lines of growth; in fresh state covered with a distinct pale grey-brown periostracum; hinge-line rather thin. No distinct impression at the hinder area.

Elphinstone and Sullivan Islands. *Moluccas.*

The peculiar periostracum, not before noticed in this species as far as I know, proves it to be also an inhabitant of brackish water.

66. *LUCINA (ANODONTIA) PHILIPPINARUM*, Hanley, *Catal. Rec. Bivalv.* p. 348; Reeve, *Conch. Icon.* vi. pl. iv. fig. 18.

Shell rather square, abruptly truncated before, somewhat solid, compressed, encircled with regular concentric ribs at about equal distances; also covered with a distinct brown periostracum. The impression of the hinder area often rather faint, but always existing. Hinge-line rather solid; ligament very thick. Largest specimen 72 millim. high, 70 millim. long.

Elphinstone Island, Sullivan Island in brackish water, in company with *Cyrena*. Kisseraing, on mud-flats. *Singapore, Philippines.*

*Lucina induta*, Stoliczka, from Port Canning, is, according to specimens received by the author, a dwarf variety of this species. *Cycladichama luciniformis*, Valenciennes, Voy. au Pôle Sud, Moll. p. 116, pl. 26. fig. 3, from the Philippines, resembles also these two species, but is provided with distinct teeth in the hinge, which are wanting in both; and differs also somewhat in its outlines.

#### TELLINIDÆ.

67. *TELLINA (MACOMA) BIRMANICA*, Philippi, *Abbildungen*, Tell. pl. 5. fig. 1; Reeve, *Conch. Icon.* vol. xvii. pl. xxxii. fig. 177.

Mergui, mud-flats. *Mergui.*

#### MACTRIDÆ.

68. *LUTRARIA ELONGATA*, Gray, Reeve, l. c. viii. pl. i. fig. 2.

More elongated, thinner, and more convex than most other species of this genus; periostracum pale yellowish grey; rather small, 40 millim. long, 16½ millim. high.

Minthautoung, near Mergui.

Burrows on the banks of tidal estuary of Tenasserim river.

#### PHOLADIDÆ.

69. *TEREDO (CALOBATES) THORACITES*, Gould, *Proc. Boston Soc. Nat. Hist.* vi. p. 15; Wright, *Trans. Linn. Soc.* xxv. 1866, pl. 64. figs. 6-12.

Elphinstone Island, from trunks of old mangrove. *Tavoy.*

## D. TRULY MARINE MOLLUSCA.

## a. CEPHALOPODA.

70. *OCTOPUS RUGOSUS*, *Bosc*, *d'Orbigny*, *Céphalopod. acétab. viv. et foss.* pl. 6.

Mergui, common. *Mauritius*, *Java*, *Philippines*, also in the tropical part of the Atlantic.

71. *LOLIGO SUMATRENSIS*, *d'Orbigny*, *loc. cit.* pl. 13. figs. 1-3.

Mergui, common. *Sumatra*, *Philippines*.

72. *SEPIA ACULEATA*, *Hasselt*, *d'Orbigny*, *loc. cit.* pl. 5 bis.

Mergui, common. *Banka*, *Java*, *Macassar*, *Philippines*, *Japan*.

## b. GASTROPODA PROSOBRANCHIA.

## CONIDEA.

73. *CONUS SURATENSIS*, *Hwass*, *Kiener*, *Spec. Coq.* pl. 37. fig. 4; *Reeve, Conch. Icon.* vol. i. pl. iv. fig. 18.

King Island Bay. *Philippines*.

74. *CONUS ACHATINUS*, *Hwass*, *Kiener*, pl. 40. fig. 1, *a-c*; *Reeve, Conch. Icon.* i. pl. xxxv. fig. 191.

Elphinstone Island and King Island Bay. *Tranquebar*, *Singapore*, *Java*, *New Caledonia*.

75. *CONUS MILIARIS*, *Hwass*, *Kiener*, pl. 13. fig. 1; *Reeve, Conch. Icon.* i. pl. xxxvi. fig. 198.

Owen Island. *Mauritius*, *Java*, *Moluccas*, *China Sea*, *Pau-motu Islands*.

76. *CONUS (HERMES) TEREBRA*, *Born*, *Kiener*, pl. 36. fig. 2; *Reeve, Conch. Icon.* i. pl. vii. fig. 38.

Elphinstone Island Bay. *Mauritius*, *Ceylon*, *Java*, *Timor*, *Philippines*, *New Caledonia*.

77. *CONUS (CYLINDER) TEXTILE*, *L.*, *Kiener*, pl. 90; *Reeve, Conch. Icon.* i. pl. xxxviii. fig. 209.

Elphinstone Island. *Red Sea*, *Mauritius*, *Ceylon*, *Andamans*, *Nicobars*, *Salang*, *Java*, *Moluccas*, *Timor*, *Society Islands*, *New Guinea*, *Philippines*.

78. *CONUS (CYLINDER) AURATUS*, *Hwass*, *Kiener*, pl. 86. fig. 2; *Reeve, Conch. Icon.* i. pl. xxv. fig. 141.

Owen Island. *Mauritius*, *Ceylon*, *Chain Island (Pacific)*.

## PLEUROTOMIDÆ.

79. PLEUROTOMA (TURRIS) ARMILLATA, *Reeve, Conch. Icon. i.*  
Pleurotoma, pl. xxi. fig. 176.

Sullivan Island, 7 fathoms. *Philippines.*

80. PLEUROTOMA (DRILLIA) CRENULARIS, *Lam., Reeve, Conch. Icon. i.* Pleurotoma, pl. vii. fig. 54.

Mergui, King Island and Sullivan Island, 4 and 7–10 fathoms.  
*Tranquebar, Singapore.*

81. PLEUROTOMA (SURCULA) JAVANA, *L., Reeve, Conch. Icon. i.*  
pl. iv. fig. 28.

Pleurotoma nodifera, *Lam., Kiener, Icon. pl. 12. fig. 1.*

Sullivan Island, 7–10 fathoms; young specimens. *Madras, Tranquebar, Singapore, Java.*

82. CLAVATULA NITENS, *Hinds, Voy. of the 'Sulphur,' Zool. pl. 6. fig. 17; Reeve, l. c. i.* Pleurotoma, pl. xxii. fig. 189.

Mergui. *Malacca, Macassar, New Guinea.*

83. MANGELIA (?) POLITA, *Hinds, P. Z. S. 1843; Reeve, Conch. Icon. i.* Pleurotoma, pl. xviii. fig. 150.

With only vertical stout ribs.

Sullivan Island, 7–10 fathoms. *Macassar.*

84. MANGELIA (?) FAIRBANKI, *Nevill, Journ. As. Soc. Bengal, vol. xliv. pt. 2, 1875, pl. 7. fig. 2.*

Sharply cancellated, sexangular.

Sullivan Island, 7–10 fathoms. *Bombay, Ceylon?, Andamans?*

## TEREBRIDÆ.

85. TEREBRA STRIGILATA, *L., Kiener, fig. 18; Reeve, Conch. Icon. xii. pl. xviii. fig. 85.*

Owen Island, 7 fathoms. *Mauritius, Singapore, New Guinea, Hawaiian Islands.*

86. TEREBRA (ABRETIA) TRICOLOR, *Sow.*

Terebra tenuiolata, *Quoy & Gaimard, Voy. 'Astrolabe,' Moll. pl. 36. figs. 25, 26; Kiener, fig. 33.*

Owen Island, 7 fathoms. *Tongatabu.*

87. TEREBRA (ABRETIA) SWAINSONI, *Deshayes, Reeve, Conch. Icon. xii. pl. xxii. fig. 118.*

King Island, mud-bank, exposed at low water (dead specimens).  
*Sandwich Islands.*

88. TEREBRA (ABRETIA) SEROTINA, *Adams and Reeve, Zool. Voy. 'Samarang,'* pl. 10. fig. 20; *Reeve, l. c. xii. pl. xv.* fig. 66.  
Mergui, mud-flats; Sullivan Island, 7 fathoms. *Japan.*

89. MYURELLA LONGISCATA, *Deshayes, Reeve, Conch. Icon. xii.* Terebra, pl. xxi. fig. 103.  
Sullivan Island, 7 fathoms. *Philippines.*

#### CANCELLARIIDÆ.

90. CANCELLARIA COSTIFERA, *Sow., Reeve, l. c. x. pl. xii.* fig. 57.  
Mergui and King Island, littoral; small-sized specimens.  
*Mauritius, Philippines.*

#### MURICIDÆ (*including PURPURIDÆ*).

91. MUREX TERNISPINA, *Lam., Reeve, Conch. Icon. iii. pl. xix.* figs. 73 & 76.

King Island Bay, mud-banks exposed at spring-tides, and at a depth of 7 fathoms; Laloon Bay, Elphinstone Island; Owen Island; Sullivan Island; 6-7 fathoms. *Madras, Salang, Singapore, Celebes.*

92. MUREX (CHICOREUS) ADUSTUS, *Lam., Kiener, pl. 33.* fig. 1; *Reeve, Conch. Icon. iii. pl. viii.* fig. 29.

King Island and Sullivan Island. *Mauritius, Ceylon, Andaman, Salang, Singapore, Java, Celebes, Philippines.*

93. MUREX (CHICOREUS) RUBIGINOSUS, *Reeve, l. c. iii. pl. viii.* fig. 32.

Owen Island. *Philippines.*

94. MUREX (CHICOREUS) TORREFACTUS, *Sow., Reeve, Conch. Icon. iii. pl. x.* fig. 41.

Elphinstone Island Bay; King Island. *Philippines.*

95. MUREX (CHICOREUS) MICROPHYLLUS, *Lam., Reeve, Conch. Icon. iii. pl. x.* fig. 40.

Elphinstone Island. *Ceylon, Singapore.*

96. MUREX (OCINEBRA) CAPUCINUS, *Chemnitz, Kiener, pl. 45.* fig. 2; *Reeve, Conch. Icon. iii. pl. ii.* fig. 10.

Kisseraing and Owen Islands. Small specimens of *Ostrea cucullata* are fixed on several of them. *Coromandel, Ceylon, Salang, Celebes.*

97. RICINULA MURICINA, *Blainville, Monogr. Gen. Poupre, Nouv. Annales du Muséum d'Hist. Nat.* i. 1832, pl. 10. figs. 2-4; *Kiener, Purpura*, figs. 13 & 15.

King Island ; Elphinstone Island ; Sullivan and Owen Islands. Very common, and variable in size and form. *Red Sea, Mauritius, Nicobars, Singapore, Celebes, Philippines, Hawaiian Islands.*

98. RICINULA TRITONIFORMIS, *Blainville, loc. cit.* p. 33, pl. 10. fig. 10 ; *Kiener, Purpura*, fig. 18.

King and Elphinstone Islands, littoral.

99. RICINULA MUSIVA, *Kiener, Purpura*, fig. 22 ; *Reeve, Conch. Icon.* vol. iii. *Purpura*, pl. xi. fig. 52.

Black and red tubercles in alternating spiral rows.

King Island Bay. *Celebes.*

100. RICINULA PARVA, *Reeve, Conch. Icon.* iii. pl. vi. fig. 43.

Allied to the preceding.

King Island. *Philippines.*

101. RICINULA (MORULA) TUBERCULATA, *Blainville, loc. cit.* ; *Kiener, Purp.* fig. 10 ; *Reeve, l. c.* iii. *Ricinula*, pl. ii. fig. 11.

*Purpura granulata, Duclos, Ann. Sci. Nat.* t. xxvi. 1832, pl. 2. fig. 9.

Sullivan and Owen Islands. *Red Sea, Zanzibar, Natal, Mauritius, Vizagapatam, Nicobars, Celebes, Polynesian Islands.*

102. RICINULA (MORULA) ANAXARES, *Duclos, loc. cit.* ; *Kiener, Purp.* fig. 17 ; *Reeve, Conch. Icon.* iii. *Purpura*, pl. xii. fig. 17.

Sullivan Island. *Red Sea, Zanzibar, Mauritius, Polynesian Islands.*

103. ENZINA MENDICARIA, *L.*, *Kiener, Columbella*, pl. 6. fig. 1 ; *Reeve, Conch. Icon.* iii. *Ricinula*, pl. ii. fig. 8.

King and Owen Islands, littoral. *Red Sea, Zanzibar, Natal, Mauritius, Ceylon, Andamans, Java, Philippines, New Zealand.*

104. ENZINA ZONALIS, *Lam. Hist. Nat. Anim. s. Vert.* ed. 2, viii. p. 274 (*Columbella*) ; *Chemnitz, Conch.-Cab.* vol. ii. fig. 459.

*Ricinula lineata, Reeve, Conch. Icon.* iii. pl. vi. fig. 51.

Owen Island. *Philippines.*

105. ENZINA CONCINNA, *Reeve, l. c.* iii. *Ricinula*, pl. v. fig. 35.

King and Owen Islands. *Philippines.*

106. PURPURA PERSICA, *Gmelin, Kiener*, fig. 67 ; *Reeve, Conch. Icon.* iii. pl. ii. fig. .

Sullivan Island, littoral. A specimen of 105 millim. in length and 72 millim. breadth; *Ostrea cucullata* fixed to it. *Mauritius, Marquesas.*

107. PURPURA (STRAMONITA) MANCINELLA, L., *Kiener*, fig. 46; *Reeve, Conch. Icon.* iii. pl. i. fig. 2; *Quoy & Gaimard, Voy. 'Astrolabe,' Zool.* pl. 38. figs. 14–16.

Elphinstone Island. *Madagascar, Ceylon, Amboina.*

108. PURPURA (THALESSA) HIPPOCASTANUM, L.

Var. P. INTERMEDIA, *Kiener*, fig. 34.—P. distinguenda, *Dunker, Moll. d. Novara Exped.* pl. 1. fig. 3.

Mergui, Elphinstone Island; Crow Islet, between King Island and Hayes Island; Sullivan and Owen Islands. *Mauritius, Zanzibar, Nicobars.*

Var. PURPURA BITUBERCULARIS, *Kiener*, fig. 32.—P. *Kieneri, Deshayes.*

Elphinstone Island; King Island. *Mozambique, Zanzibar, Moluccas, Australia.*

109. PURPURA (CUMA) IMPERIALIS (*Blainville?*), *Kiener*, fig. 39; *Reeve, Conch. Icon.* iii. pl. vii. fig. 30.

Mergui †.

The original figure of Blainville, *loc. cit.* pl. 11. fig. 6, is rather different.

110. PURPURA (CUMA) TIARELLA, *Lam.*, *Kiener*, fig. 41; *Reeve, Conch. Icon.* iii. pl. ix. fig. 39.

Nearly allied to the preceding.

Mergui, mud-flats. *Port Canning.*

The shell from Vanikoro, figured by Quoy and Gaimard, *Voy. 'Astrolabe,'* seems also very different, and resembles rather *Ricinula turbinella.*

111. PURPURA (CUMA) SACELLUM, *Chemnitz, Conch.-Ca in et*, vol. x. figs. 1561, 1562; *Kiener, Purpura*, pl. 14. fig. 39a; *Reeve, Conch. Icon.* iii. pl. xi. fig. 58.

King Island. *Tranquebar, Nicobars.*

112. PURPURA (CUMA?) COSTATA, *Blainville, Nouv. Annales Mus. Hist. Nat.* i. 1832, pl. 11. fig. 8; *Kiener*, fig. 51.

Purpura gradata, *Jonas, Philippi, Abbildungen, Purp.* fig. 2.

Purpura trigona, *Reeve, Conch. Icon.* iii. pl. xi. fig. 53.

Recognizable by its biconical form.

Mergui, Kisseraing, and Owen Islands, common. *Port Canning, Malacca, Singapore, Banka, North Australia.*

### BUCCINIDÆ.

113. HEMIFUSUS TERNATANUS, *Gmelin, Chemnitz, Conch.-Cab.* vol. iv. figs. 1304, 1305; *Kiener, Fusus, fig. 27; Reeve, Conch. Icon. iv. Pyrula, pl. ii. fig. 6.*

King Island. *Singapore, Moluccas, Philippines.*

114. HEMIFUSUS (PUGILINA) PUGILINUS, *Born, Reeve, Conch. Icon. iv. Pyrula, pl. i. fig. 1.*

*Pyrula vespertilio, Lam., Kiener, Pyr. pl. 12. fig. 1; Eydoux & Souleyet, Voy. 'Bonite,' Zool. pl. 42. figs. 7-12.*

Mergui, Elphinstone Island Bay, sand-flat; Kisseraing Island. *Negapatam, Ceylon, Singapore, Borneo, Cochin China.*

115. POLLIA TRANQUEBARICA, *Gmelin, Chemnitz, Conch.-Cab.* vol. iv. figs. 1146, 1147; *Kiener, Buccinum, fig. 92; Reeve, Conch. Icon. iii. Buccinum, pl. iii. fig. 17.*

Sullivan Island, 5 fathoms. *Tranquebar.*

116. PHOS ROSEATUS, *Hinds, Zool. Voy. 'Sulphur,' pl. 10. figs. 9, 10; Sowerby, Thesaur. Conch. iii. pl. 221. figs. 1-3.*

Owen Island, 7 fathoms. *Sumatra, Amboina, Philippines.*

117. EBURNA CANALICULATA, *Schumacher.*

*Eburna spirata, Lam. (not Linné), Kiener, pl. i. fig. 1; Reeve, l. c. v. pl. i. fig. 7.*

*Periostracum distinct, somewhat velvety, pale brown.*

Sullivan Island, 4 fathoms. *Ceylon.*

118. NASSA TÆNIA, *Gmelin.*

*Buccinum olivaceum, Bruguière, Kiener, Bucc. fig. 53; Reeve, l. c. viii. Nassa, pl. iii. fig. 19; Eydoux & Souleyet, Voy. 'Bonite,' Zool. pl. 41. figs. 14-16.*

The largest species of this genus, very variable in size; upper whorls ribbed; the ribs disappear sooner or later towards the last whorl.

King and Kisseraing Islands. *Mauritius, Andamans, Ceylon, Singapore, Moluccas.*

119. NASSA STOLATA, *Gmelin, Chemnitz, Conch.-Cab.* iv. figs. 1167, 1168.

*Buccinum ornatum, Kiener, Bucc. fig. 83; Reeve, Conch. Icon. viii. Nassa, pl. v. fig. 33.*

Last whorl very inflated; nearly smooth, white, with large chestnut bands.

Mergui. *Ceylon, Singapore, Java, Borneo.*

120. *NASSA Marginulata*, Lam., Kiener, Bucc. fig. 117; Reeve, Conch. Icon. viii. pl. vii. fig. 43.

*Buccinum arcularia papillosa*, Chemnitz, Conch.-Cab. vol. x. fig. 1474.

Vertical ribs; whorls angulated above.

Mergui, mud-flats; King Island, littoral; Elphinstone Island Bay and Sullivan Island, 7-10 fathoms. *Celebes.*

Var. *HEPATICA*, Pulteney, Montagu, Testacea Britannica, pl. 8. fig. 1; Reeve, Conch. Icon. viii. pl. viii. figs. 50, 51.

More elongated.

King Island. *Moluccas.*

121. *NASSA*, sp. indetermined.

Mergui, mud-flats; King Island, littoral.

Only young specimens, resembling *N. planicostata*, Reeve, Conch. Icon. viii. pl. xii. fig. 76.

122. *NASSA RAVIDA*, Adams, Reeve, l. c. viii. pl. xi. figs. 68 & 74. Sullivan Island, 7 fathoms. *Malacca, Philippines, Hawaiian Islands.*

Also only young specimens.

123. *NASSA ALBESCENS*, Dunker, Philippi, Abbildungen, Buccinum, pl. 2. fig. 15; Reeve, l. c. viii. Nassa, pl. xv. fig. 100.

*Nassa bicolor*, Hombr. & Jacq. Voy. au Pôle Sud, Moll. pl. 21. figs. 41, 42.

White, regularly granulated, angulated near the suture.

Owen Island. *Red Sea, Mauritius, Timor, New Guinea, Samoa and Viti Islands, Carolines.*

124. *NASSA MURICATA*, Quoy and Gaimard, Voy. 'Astrolabe,' Zool. pl. 32. figs. 32, 33; Reeve, l. c. viii. pl. xi. fig. 73.

Distinctly cancellated; the interstices broad, square, about four rows on the last whorls.

King Island. *Mauritius, New Ireland.*

Var. *HORRIDA*, Dunker, Philippi, Abbildungen, Bucc. pl. 2. fig. 8; Reeve, Conch. Icon. viii. pl. xi. fig. 69.

Vertical ribs prevailing, the spiral liræ more numerous.

King Island. *Mauritius.*

125. *NASSA NODATA*, Hinds, Zool. Voy. 'Sulphur,' pl. 9. figs. 14, 15; Reeve, Conch. Icon. viii. pl. vii. fig. 41.

Strongly cancellated, somewhat similar to the European *N. incrassata*. Last whorl angulated above.

King and Elphinstone Islands. *Malacca*.

126. *NASSA LIRATA*, *Marrat*, *On the Varieties of Nassa*, *Liverpool*, 1880, pl. 1. figs. 18, 19.

Last whorl angulated above; dark brown, with a pale orange band.

King Island. *Philippines*.

127. *NASSA FOVEOLATA*, *Dunker*, *Zeitschr. f. Malak.* 1847, p. 63; *Reeve*, *Conch. Icon.* viii. pl. xiii. fig. 83.

King Island †.

128. *NASSA PUNCTATA*, *Adams*, *Reeve*, l. c. viii. pl. viii. fig. 54.  
Smooth, variegated with grey, yellowish and blackish; spire elongated, pointed.

Mergui; King Island and Owen Island. *Mauritius*, *Philippines*.

129. *NASSA THERSITES*, *Bruguière*, *Rumph. Amb. Rar.* pl. 27. fig. N; *Kiener*, *Bucc.* fig. 113; *Reeve*, l. c. viii. pl. x. fig. 65.

*Buccinum pullus*, *Linné*.

Recognizable by the oblique hump-like smooth gibbosity on the back of the last whorl opposite to the aperture.

Elphinstone Island, on sand, plentiful; King Island. *Salang*, *Singapore*, *Philippines*, *New Guinea*.

Var. *ACYPHA*, n. (Pl. XVI. fig. 1, a, b, c.)

The whole of the last whorl regularly vertically ribbed, with only faint indication of the characteristic hump.

Mergui.

130. *NASSA CANCELLATA*, *Adams*, *Reeve*, l. c. viii. [pl. xxiii. fig. 155.]

Mergui, mud-flats. *Mauritius*, *Philippines*.

131. *NASSA LABECULA*, *Adams*, *Reeve*, l. c. viii. pl. xxv. fig. 166.

King Island and Pilai Bay, living a little below high-water mark. *Celebes*, *Timor*, *Philippines*.

132. *NASSA DELICATA*, *Adams*, *Reeve*, l. c. [viii. pl. xxviii. fig. 180?]

Owen Island, 7 fathoms. *Philippines*.

133. *NASSA GLOBOSA*, Quoy and Gaimard, *Voy. 'Astrolabe,' Zool.* pl. 32. figs. 25-27; Reeve, *Conch. Icon.* viii. pl. x. fig. 62.  
*Buccinum clathratum*, Kiener, fig. 108.  
 Owen Island. *Celebes, Moluccas, Timor, New Zealand.*

#### FUSIDÆ.

134. *FASCIOLARIA FILAMENTOSA*, Lam., Kiener, pl. 8. fig. 1; Reeve, *Conch. Icon.* iv. pl. ii. fig. 4.  
 Mergui; Sullivan Island. *Red Sea, Zanzibar, Seychelles, Ceylon, Andamans, Java, Vanikoro, New Hebrides.*

#### COLUMBELLIDÆ.

135. *COLUMBELLA VERSICOLOR*, Sow. *Thesaur. Conch.* i. figs. 41 & 46; Reeve, *Conch. Icon.* xi. pl. xi. fig. 51.  
*Columbella scripta*, Lam., Kiener, pl. 6. fig. 3 (not *scripta* of Linné).  
 Pale yellow, finely spotted; upper part of the last whorl white, gibbous, with orange patches.  
 King and Owen Islands. *Ceylon, Philippines, Chain Island (Pacific).*

136. *COLUMBELLA PARDALINA*, Lam., Kiener, pl. 4. fig. 3; Sowerby, *Thesaur.* i. figs. 90-92; Reeve, l. c. xi. pl. xv. fig. 75.  
 Smooth, white, with round black or dark-brown patches.  
 King Island and Owen Island, littoral. *Singapore, Timor, Philippines.*

137. *COLUMBELLA (ANACHIS) TERPSICHORE*, Sow. *Thesaur.* i. figs. 98, 99; Reeve, *Conch. Icon.* xi. pl. xii. fig. 58.

*Columbella lineolata*, Kiener, pl. 13. fig. 3.  
 Vertically ribbed.  
 Sullivan Island, 7-10 fathoms. *Ceylon, Sumatra, Java, Amboina.*

*COLUMBELLA DUCLOSIANA*. See above, no. 41.

#### MITRIDÆ.

138. *MITRA (NEBULARIA) ADUSTA*, Lam., Chemnitz, *Conch.-Cab.* vol. iv. fig. 136a; Kiener, fig. 15; Reeve, l. c. ii. pl. iv. fig. 25.  
 Laloon Bay, Elphinstone Island. *Moluccas, Timor, Philippines, New Guinea, Polynesian Islands.*

139. *MITRA (CANCILLA) CIRCULATA*, Kiener, fig. 13; Reeve, l. c. ii. pl. xi. fig. 77; Chemnitz, *Conch.-Cab.* vol. iv. fig. 1391.  
 King Island. *Mauritius, Singapore, Philippines.*

140. MITRA (CANCILLA) INTERLIBATA, *Reeve*, *l. c.* ii. pl. x.  
fig. 70.

Sullivan Island, 6 fathoms. *Mauritius*, *Philippines*, *Samoa*,  
*Viti, Hawaiian Islands*.

141. MITRA (CHRYSAME) CUCUMERINA, *Lam.*, *Kiener*, fig. 24;  
*Reeve, Conch. Icon.* ii. pl. xxv. fig. 201; *Chemnitz, Conch.-Cab.* iv.  
figs. 1398, 1399.

King Island Bay, littoral; Owen Island. *Mauritius, Ceylon*.

142. STRIGATELLA COLUMBELLÆFORMIS, *Kiener*, *Mitra*, fig. 46;  
*Reeve, Conch. Icon.* ii. *Mitra*, pl. xviii. fig. 138.

King Island Bay. *Samoa and Paumotu Islands*.

143. STRIGATELLA SCUTULATA, *Chemnitz, Conch.-Cab.* vol. x.  
figs. 1428, 1429; *Kiener, Mitra*, fig. 57; *Reeve, Conch. Icon.* ii.  
*Mitra*, pl. xii. fig. 82.

Sullivan Island. *Timor, Philippines*.

144. STRIGATELLA PAUPERULA, *L.*, var. VIRGATA, *Reeve,*  
*Conch. Icon.* ii. *Mitra*, pl. xxv. fig. 197.

Owen Island. *Zanzibar, Kingsmill Island*.

145. STRIGATELLA AMPHORELLA, *Lam.*, *Kiener*, fig. 56; *Reeve,*  
*Conch. Icon.* ii. *Mitra*, pl. xii. fig. 85.

Elphinstone Island Bay. *Borneo, Philippines*.

#### MARGINELLIDÆ.

146. MARGINELLA (GLABELLA) ELEGANS, *Kiener*, fig. 35;  
*Reeve, Conch. Icon.* xv. pl. ii. fig. 4; *Martini-Chemnitz, Conch.-Cab.* ii. figs. 426, 427.

King Island Bay, littoral; Elphinstone Island Bay, mud-flat.  
*Nicobars, Salang, Malacca*.

147. MARGINELLA (CRYPTOSPIRA) QUINQUEPLICATA, *Lam.*,  
*Kiener*, pl. 2. fig. 3; *Reeve, l. c.* xv. pl. x. fig. 40.

Laloon Bay, Elphinstone Island, and Elphinstone Island,  
sand-flat. *Penang, Malacca, Singapore*.

#### OLIVIDÆ.

148. OLIVA MAURA, *Lam.*, *Martini-Chemnitz, Conch.-Cab.* ii.  
figs. 472, 473; *Reeve, Conch. Icon.* vi. pl. vii. fig. 10d.

Elphinstone Island Bay. *Red Sea, Mauritius, Ceylon, Andaman, Java, Borneo, Moluccas*.

149. OLIVA SCRIPTA, *Lam. Encycl. Méth.*, Vers, pl. 362. fig. 4; *Chenu, Illustrations Conch.* pl. 11. figs. 13, 14; *Reeve, Conch. Icon.* vi. pl. xiv. fig. 27.

Oliva mauritiana, var., *Sowerby, Thes.* fig. 140.

Elphinstone Island. *Mauritius, Seychelles.*

150. OLIVA MACLEAYI, *Duclos, Chenu, Illustr. Conch.* pl. 23. fig. 13-16.

Oliva maura, var., *Reeve, Conch. Icon.* vi. pl. vii. fig. 10g.

Sullivan Island. *Seychelles, Ceylon.*

151. OLIVANCILLARIA GIBBOSA, *Born, Martini-Chemnitz, Conch.-Cab.* ii. figs. 539, 540, 565, 566.

Oliva utriculus, *Lam., Chenu, Illustr. Conch.* pl. 18. figs. 1-3; *Reeve, Oliva*, pl. viii. fig. 12.

Elphinstone Island Bay. *Madras, Ceylon.*

152. ANCILLARIA AMPLA, *Gmelin.*

Ancillaria candida, *Lam., Kiener*, pl. 5. fig. 4; *Sowerby, Thesaur.* fig. 29; *Reeve, Conch. Icon.* xv. pl. viii. fig. 27.

Owen Island; Sullivan Island, 4 fathoms. *Red Sea, Madras, Ceylon.*

#### CASSIDIDÆ.

153. CASSIS (SEMICASSIS) PILA, *Reeve, l. c. v.* pl. ix. fig. 21.

King Island Bay. *Salang, China Sea.*

154. DOLIUM FASCIATUM, *Bruguière, Kiener*, pl. 5; *Reeve, Conch. Icon.* v. pl. vii. fig. 11.

King Island. *Madras, Ceylon, Philippines.*

155. RANELLA ALBIVARICOSA, *Reeve, l. c. ii.* pl. i. fig. 2.

Murex rana, *L., Chemnitz, Conch.-Cab.* iv. figs. 1268, 1269.

King Island Bay, mud-banks exposed at spring-tides. *Ceylon.*

156. RANELLA TUBERCULATA, *Broderip, Kiener*, pl. 12. fig. 2; *Reeve, Conch. Icon.* ii. pl. vii. fig. 36; *Eydoux & Souleyet, Voy. 'Bonite,' Zool.* pl. 44. figs. 24, 25.

Mergui, King Island, littoral. *Vizagapatam, Andamans, Salang, Malacca.*

#### CYPRÆIDÆ.

157. CYPRÆA TIGRIS, *L., Kiener*, pl. 1, pl. 45, & pl. 46. fig. 1; *Reeve, Conch. Icon.* iii. pl. iv. fig. 12; *Quoy et Gaimard, Voy. 'Astrolabe,' Zool.* pl. 47. fig. 1.

Locality not stated. *Zanzibar, Mauritius, Ceylon, Andamans, Singapore, Java, Tonga.*

158. CYPRÆA ONYX, L., Kiener, pl. 44. fig. 1; Reeve, *Conch. Icon.* iii. pl. x. fig. 39a.

King Island Bay. *Seychelles, Andamans.*

159. CYPRÆA VITELLUS, L., Kiener, pl. 19. fig. 1; Reeve, *l. c. iii.* pl. v. fig. 14; Quoy & Gaimard, *Voy. 'Astrolabe,' Zool.* pl. 48. figs. 8, 9.

King Island Bay. *Red Sea, Natal, Seychelles, Ceylon, Andamans, Singapore, Java, Moluccas, Tonga.*

160. CYPRÆA TURDUS, Lam., Kiener, pl. 11. fig. 2; Reeve, *Conch. Icon.* iii. pl. ix. fig. 31.

Forbes Island; Sullivan Island. *Red Sea, Persian Gulf.*

161. CYPRÆA LAMARCKI, Gray, Reeve, *l. c. iii.* pl. x. fig. 37.

Cypræa miliaris (non Gmelin), Kiener, pl. 30. fig. 2.

King Island Bay, littoral; Laloon Bay, Elphinstone Island. *Zanzibar, Salang.*

162. CYPRÆA CAURICA, L., Kiener, pl. 10. fig. 2; Reeve, *Conch. Icon.* iii. pl. xi. fig. 46; A. Adams and Reeve, *Zool. Voy. 'Samarang,' Moll.* pl. 5. fig. 5.

King Island Bay. *Red Sea, Zanzibar, Natal, Mauritius, Andamans, Singapore, Java, Timor, Moluccas.*

163. CYPRÆA ERRONEA, L., Sowerby, *Conchol. Illustr.* fig. 124.

Cypræa spurca, Born, *Test. Mus. Cæs. Vindob.* pl. 8. fig. 14.

Cypræa olivacea, Lam., Quoy and Gaimard, *Voy. 'Astrolabe,' Zool.* pl. 48. fig. 13.

King Island; Elphinstone Island; Owen Island. *Red Sea, Mauritius, Ceylon, Andamans, Singapore, New Guinea.*

164. CYPRÆA EROSA, L., Kiener, pl. 9. fig. 2; Reeve, *l. c. iii.* pl. xi. fig. 43; Quoy and Gaimard, *Voy. 'Astrolabe,' Zool.* pl. 47. figs. 12, 13.

Laloon Bay, Elphinstone Island. *Red Sea, Natal, Mauritius, Ceylon, Andamans, Singapore, Moluccas, Java.*

165. CYPRÆA XANTHODON, Gray, Sowerby, *Conchol. Illustr.* fig. 18; Kiener, pl. 57. fig. 3; Reeve, *l. c. iii.* pl. xiii. fig. 55.

King Island.

166. CYPRÆA MAURITIANA, L., Kiener, pls. 39, 40; Reeve, *l. c. iii.* pl. i. fig. 1; Quoy & Gaimard, *Voy. 'Astrolabe,' Zool.* pl. 48. figs. 2-4.

Casuarina Bay, Sullivan Island, littoral. *Mauritius, Ceylon, Andamans, Moluccas, New Zealand.*

167. CYPRÆA ARABICA, L., *Kiener*, pl. 17. fig. 1; *Reeve, Conch. Icon.* iii. pl. i. fig. 2; *Quoy & Gaimard, Voy. 'Astrolabe'*, pl. 48. fig. 5.

King Island, on rocks at spring-tide; Elphinstone Island; Sullivan Island; Owen Island. Mergui (*W. Jameson*). Red Sea, Zanzibar, Natal, Mauritius, Andamans, Penang, Java, New Guinea.

168. CYPRÆA MONETA, L., *Kiener*, pl. 34. fig. 1; *Reeve, l. c. iii. pl. xv. fig. 74*; *Quoy & Gaimard, Voy. 'Astrolabe'*, pl. 48. fig. 7.

Great Western Torres Island. Red Sea, Mauritius, Seychelles, Madras, Salang, Singapore, Tonga.

169. CYPRÆA HIRUNDO, L., *Kiener*, pl. 32. fig. 1; *Reeve, Conch. Icon.* iii. pl. xix. fig. 104.

Elphinstone Island. Mauritius, Ceylon, Java.

170. CYPRÆA NEGLECTA, *Sow. Conch. Illustr.* fig. 12 \*; *Reeve, Conch. Icon.* iii. pl. xix. fig. 100.

Sullivan Island, littoral. Mauritius?

171. CYPRÆA SAULÆ, *Gaskoin*, *Reeve, l. c. iii. pl. xiv. fig. 62.* Elphinstone Island. Manila.

172. OVULA OVUM, L.

Ovula oviformis, *Lam.*, *Kiener*, pl. 1; *Reeve, l. c. xv. pl. i. fig. 3; Quoy & Gaimard, Voy. 'Astrolabe'*, pl. 47. fig. 7.

Little Torres Island. Seychelles, Ceylon, Andamans, Java, Celebes, Timor, Moluccas, New Guinea, Friendly and Society Islands.

173. OVULA BIROSTRA, *Lam.*, *Kiener*, pl. 5. fig. 1; *Reeve, Conch. Icon.* xv. pl. x. fig. 45.

King Island Bay, littoral. Java (Lamarck).

174. OVULA DENTATA, *Adams & Reeve, Zool. Voy. 'Samarang'*, pl. 6. fig. 4; *Reeve, Conch. Icon.* xv. pl. viii. fig. 36.

King Island. Singapore, Borneo, Japan.

175. OVULA TRAILLI, *Adams*, *Reeve, l. c. xv. pl. viii. fig. 38.* King Island Bay, littoral. Malacca.

176. OVULA FRUTICUM, *Adams*, *Reeve, l. c. xv. pl. iv. fig. 16.* King Island Bay, mud-bank exposed at low water. Malacca.

## VELUTINIDÆ.

177. *NARICA LIGATA*, Récluz, *Monogr. Narica, Mag. Zool.* 1845, pl. 121. fig. 2. (Not Reeve, *Conch. Icon.* xx. Vanikoro, pl. i. fig. 6, which is much stronger cancellated.)

Islet in King Island Bay, littoral. *Philippines.*

## NATICIDÆ.

178. *NATICA MACULOSA*, Lam.

*Natica pellis-tigrina*, Chemnitz, Reeve, *Conch. Icon.* ix. pl. xiii. fig. 57; Eydoux & Souleyet, *Voy. 'Bonite,'* pl. 35. fig. 18.

Mergui, mud-flats; Elphinstone Island, sand-flat. *Ceylon, Salang, Singapore, Java, Siam, Philippines, Swan River.*

179. *NATICA PULICARIS*, Philippi, Küster, *Monogr. Natica*, pl. 13. fig. 9.

Columellar lip reddish yellow. Allied to *N. tincturata*, Reeve, *Conch. Icon.* ix. pl. xv. fig. 63.

Sullivan Island, 7-10 fathoms †.

180. *NATICA HELVACEA*, Lam.

*Natica pallens*, Philippi, *Zeitschr. Mal.* 1848, p. 157.

*Natica globosa*, Deshayes, Reeve, l. c. ix. pl. xi. fig. 46.

King Island Bay. *Mergui, Singapore, Java.*

181. *NATICA UNIFASCIATA*, Lam., Delessert, *Recueil Cog.* pl. 32. fig. 13; Reeve, l. c. ix. pl. xii. fig. 49.

Elphinstone Island and Owen Island. *Red Sea, Mauritius, Salang, ? west coast of Central America.*

182. *NATICA COLLIEL*, Récluz, Reeve, l. c. ix. pl. xxiv. fig. 112. Owen Island. *West Australia.*

183. *NATICA (NEVERITA) CHEMNZITZII*, Récluz, Chenu, *Illustr. Conch.* pl. 3. fig. 4; Eydoux & Souleyet, *Voy. 'Bonite,' Zool.* pl. 35. figs. 4, 5; Reeve, l. c. ix. pl. ii. fig. 7.

*Natica didyma*, Philippi, *Monogr.* pl. 1. figs. 1-4.

Owen Island. *Persian Gulf, Tranquebar, Mergui, Penang* (Eyd. & Soul. p. 575), *Singapore.*

184. *NATICA (NEVERITA) ALBUMEN*, Gmelin, Reeve, l. c. ix. pl. viii. fig. 31.

Owen Island, 7 fathoms. *Moluccas, Philippines.*

185. *NATICA (POLINICES) MAMMILLA*, L., Eydoux & Souleyet, *Voy. 'Bonite,' Zool.* pl. 35. figs. 16, 17; Reeve, l. c. ix. pl. vii. fig. 27.

King Island Bay; Laloon Bay, Elphinstone Island. *Red Sea, Zanzibar, Mauritius, Ceylon, Singapore, Celebes, Timor, Philippines.*

## STROMBIDÆ.

186. STROMBUS LUHUANUS, L., *Kiener*, pl. 27. fig. 1; *Reeve*, l. c. vi. pl. ix. fig. 19; *Quoy & Gaimard*, *Voy. 'Astrolabe'*, pl. 31. figs. 3, 4.

Owen Island. *Reunion*, *Singapore*, *Java*, *Celebes*, *Timor*, *Moluccas*, *New Guinea*.

187. STROMBUS MAURITIANUS, Lam., *Kiener*, pl. 27. fig. 2; *Reeve*, l. c. vi. pl. ix. fig. 20.

Mergui; King Island; Elphinstone Island Bay; Owen Island, 7 fathoms. *Red Sea*, *Mauritius*, *Ceylon*.

188. STROMBUS URCEUS, L., *Kiener*, pl. 30. figs. 2, 3; *Reeve*, l. c. vi. pl. xi. fig. 24.

Elphinstone Island and Owen Island. *Red Sea*, *Ceylon*, *Salang*, *Singapore*, *Celebes*.

Var. PLICATUS, Lam., *Kiener*, pl. 31. fig. 1; *Reeve*, l. c. vi. pl. ix. fig. 17; *Quoy & Gaimard*, *Voy. 'Astrolabe'*, pl. 51. figs. 6, 7.

Owen Island. *Mauritius*, *Salang*, *Singapore*, *Java*, *Timor*, *Moluccas*, *New Guinea*, *Philippines*.

189. STROMBUS FLORIDUS, Lam., *Kiener*, pl. 32. fig. 1; *Reeve*, l. c. vi. pl. vii. fig. 11; *Quoy & Gaimard*, *Voy. 'Astrolabe'*, pl. 11. figs. 12, 13.

Mergui. *Red Sea*, *Zanzibar*, *Mauritius*, *Samoa*, *Viti*, and *Society Islands*.

190. STROMBUS CANARIUM, L., *Kiener*, pl. 29. fig. 1; *Reeve*, l. c. vi. pl. 18. fig. 46; *Quoy & Gaimard*, *Voy. 'Astrolabe'*, pl. 51. figs. 10, 11.

King Island, below low-water mark, in mud; Elphinstone Island; Sullivan and Kisseraing Islands. *Ceylon*, *Java*, *Borneo*, *Celebes*, *Moluccas*, *New Guinea*.

191. STROMBUS MARGINATUS, L., *Kiener*, pl. 16. fig. 2; *Reeve*, *Conch. Icon.* vi. pl. xviii. fig. 49.

King Island, littoral, in pools on mud-banks exposed at spring-tides; Sullivan Island, 4 fathoms. *Tranquebar*, *Ceylon*, *Philippines*.

192. STROMBUS SUCCINCTUS, L., *Kiener*, pl. 10. fig. 2; *Reeve*, *Conch. Icon.* vi. pl. xvii. fig. 43.

Sullivan Island Bay. *Ceylon*, *Java*, *Moluccas*, *Philippines*.

193. PTEROCERA LAMBIS, *L.*, *Kiener*, pls. 3 & 4; *Reeve, Conch. Icon.* vi. pl. v. fig. 8; *Quoy & Gaimard, Voy. 'Astrolabe'*, pl. 49. figs. 18–20, pl. 50. figs. 6–13.

Elphinstone Island Bay. *Red Sea, Zanzibar, Madagascar, Ceylon, Nicobars, Singapore, Java, Celebes, Timor, Moluccas.*

194. RIMELLA TYLERI, *H. Adams*, *Proc. Zool. Soc.* 1863, p. 428.

Sullivan Island, 7 fathoms. *China Sea.*

195. TEREBELLUM SUBULATUM, *Lam.*, *Kiener*, fig. 1; *Adams and Reeve, Voy. 'Samarang'*, *Moll. pl. 9. fig. 6*; *Reeve, Conch. Icon. xiv. pl. i. fig. 1.*

King Island; Sullivan Island, 4 and 7–10 fathoms. *Mauritius, Ceylon, Philippines, China Sea.*

#### CERITHIIDÆ.

196. CERITHIUM (VERTAGUS) ASPERUM, *L.*, *Reeve, Conch. Icon. xv. Vertagus*, pl. v. fig. 21.

*Cerithium lineatum, Lam.*, *Kiener*, pl. 21. fig. 1; *Quoy & Gaimard, Voy. 'Astrolabe'*, pl. 54. figs. 7, 8.

Locality not indicated. *Red Sea, Zanzibar, Mauritius, Tranquebar, Ceylon, Andamans, Singapore, Moluccas, New Caledonia, Tonga.*

197. CERITHIUM (ALUCO) OBELISCUS, *Bruguière*, *Kiener*, pl. 5. fig. 1; *Reeve, l. c. xv. Vertagus*, pl. ii. fig. 7.

*Murex sinensis, Gmelin, Chemnitz, Conch.-Cab.* iv. fig. 1489.

*Mergui and Owen Island. Red Sea, Natal, Seychelles, Ceylon, Salang, Singapore, Sumatra, Java, Timor, Moluccas, Southern China, Western Australia.*

198. CERITHIUM CORALLIUM, *Défrance*; *Kiener*, pl. 8. fig. 3; *Reeve, loc. cit. xv. pl. v. fig. 29.*

King Island and Elphinstone Island. *Ceylon, Singapore, Celebes, Moluccas, Philippines, Solomon Islands.*

199. CERITHIUM RUBUS, *Reeve, Conch. Icon. xv. pl. xi. fig. 75* (not *rubus*, *Martyn, Univ. Conch. pl. 75*).

King Island, littoral; Laloon Bay, Elphinstone Island. *Ceylon.*

200. *CERITHIUM RUGOSUM*, *Wood*, *Index Test. Suppl.* pl. 4, *Strombus*, fig. 10; *Kiener*, pl. 15. fig. 3; (*Reeve*, *l. c. xv.* pl. vii. fig. 45?).

Regularly granulated. Variable in colour: blackish, reddish brown, grey, sometimes banded.

King Island Bay; Elphinstone Island Bay, sand-flats; Owen Island. Common. *Red Sea, Zanzibar, Seychelles, Java, Moluccas, Philippines, Islands of the Pacific.*

201. *CERITHIUM VARIEGATUM*, *Quoy & Gaimard*, *Voy. 'Astrolabe'*, *Zool.* pl. 55. fig. 17; *Kiener*, pl. 15. fig. 2; *Reeve, Conch. Icon.* xv. pl. vii. fig. 41.

White, chequered with black and white.

King Island, littoral; Laloon Bay, Elphinstone Island; Owen Island. *Timor, Philippines, Tonga and Kingsmill Islands.*

202. *CERITHIUM LEMNISCATUM*, *Quoy & Gaimard*, *Voy. 'Astrolabe'*, *Zool.* pl. 54. figs. 16–18; *Kiener*, pl. 16. fig. 1; *Reeve, Conch. Icon.* xv. pl. v. fig. 27.

Rather finely granulated; whitish, with broad yellow or reddish bands.

Rangoon; sand-flats, Elphinstone Island; Owen Island. *Bintang, Moluccas, Philippines, Vanikoro.*

203. *CERITHIUM MORUM*, *Lam.*, *Kiener*, pl. 15. fig. 1.

With rather large black tubercles.

King Island, littoral; Laloon Bay, Elphinstone Island; Owen Island. *Red Sea, Mauritius, Persian Gulf, Bengal, Singapore, Java, Philippines, Vanikoro, Hongkong.*

All comparatively very small specimens, but full grown.

204. *CERITHIUM OBESUM*, *Sow.*, *Reeve, l. c. xv.* pl. ix. fig. 62.

Nearly smooth; in other respects near the former species.

King Island, mud-bank exposed at low tide; Owen Island. *Timor, Philippines.*

205. *CERITHIUM FUSIFORME*, *Sow.*, *Reeve, l. c. xv.* pl. viii. fig. 47.

King Island. *Philippines.*

*CERITHIUM PATULUM*, *Sow.* } See above, pp. 168, 169,  
*POTAMIDES*, several species. } nos. 42–47.  
*PLANAXIS PYRAMIDALIS*.

## TURRITELLIDÆ.

206. TURRITELLA COLUMNARIS, *Kiener*, pl. 7. fig. 1; *Reeve*, *Conch. Icon.* v. pl. iv. fig. 14.

Rangoon; Sullivan Island, littoral, young specimens from 7–10 fathoms. *Ceylon.*

207. TURRITELLA TRISULCATA, *Lam.*, *Kiener*, pl. 11. fig. 1; *Reeve*, *loc. cit.* v. pl. v. fig. 17.

Elphinstone Island Bay. *Red Sea, Ceylon.*

208. TURRITELLA FASTIGIATA, *Adams* and *Reeve*, *Zool. Voy. Samarang*, pl. 12. fig. 9; *Reeve*, *l. c. v.* pl. x. fig. 48.

Very slender and elongated, each whorl narrowed above.

Sullivan Island, 4 fathoms; young specimens. *China Sea.*

209. TURRITELLA CINGULIFERA, *Sow. Cat. of Shells Collect. Tankerville*, 1825, *Append.* p. xiv; *Reeve*, *l. c. v.* pl. xi. fig. 64.

*Turritella fragilis*, *Kiener*, pl. 8. fig. 3.

Small-sized, white, with chestnut spiral bands.

Sullivan Island, 4–6 fathoms. *Port Essington.*

## LITTORINIDÆ.

210. LITTORINA PYRAMDALIS, *Quoy & Gaimard*, *Voy. 'Astrolabe'*, *Zool.* pl. 33. figs. 12–15; *Philippi*, *Abbildungen, Lit.* pl. 2. figs. 19, 20; *Reeve*, *l. c. x.* pl. ii. fig. 14.

With two rows of rather stout tubercles on the last whorl.

Elphinstone Island Bay, on rocks at highest water-level; Owen Island, 4 fathoms; Sullivan Island. *Hongkong, Australia, Marquesas, New Zealand.*

211. LITTORINA GRANULARIS, *Gray*, *Zoology of Beechey's Voyage*, p. 140; *Reeve*, *l. c. x.* pl. xiii. fig. 68.

Whitish, more finely granulated.

King Island; Laloon Bay, Elphinstone Island; Sullivan Island. *Flores, Hongkong.*

For other species of *Littorina* see above, pp. 169, 170, nos. 48–51.

## RISSOIDÆ.

212. RISSOINA (PHOSINELLA) CLATHRATA, *A. Adams*, *Proc. Zool. Soc.* 1851, p. 265; *Schwartz von Mohrenstern*, *Monogr.*

Rissoina (*Denkschr. Akad. Wien*, 1860), p. 169, fig. 49; Reeve, *Conch. Icon.* xx. Rissoa, fig. 76; Nevill, *Hand-list*, ii. p. 86.

King Island. *Red Sea, Andamans, Singapore, Philippines, Australia.*

#### CALYPTRÆIDÆ.

213. CALYPTRÆA NEPTUNI, Schumacher (Mitrula); Martini-Chemnitz, *Conch.-Cab.* vol. i. figs. 119, 120.

*Calyptraea dormitoria*, Reeve, *Conch. Icon.* xi. pl. ii. fig. 5.

Elphinstone Island Bay. *Mauritius, Philippines.*

214. TROCHITA EXTINGTORIUM, Lam., Martini-Chemnitz, *Conch.-Cab.* vol. i. figs. 123, 124; Reeve, *l. c. xi. Crucibulum*, pl. v. fig. 14.

Resembling the European *T. sinensis*, L., but more pointed and marked with obliquely radiating pale-brown bands.

Sullivan Island, 4-5 and 7-10 fathoms. *Malacca.*

215. CREPIDULA (SIPHOPATELLA) WALCHI, Hermannsen (named in memory of Prof. J. E. Walch of Jena, died 1778).

*Crepidula excisa*, Philippi, *Zeitschr. Mal.* 1849, p. 24.

*Crepidula Walshi* (err. typ.), Reeve, *l. c. xi. pl. iii. fig. 17.*

*Crepidula plana*, Adams and Reeve, *Zool. Voy. 'Samarang,'* pl. 11. fig. 3.

Elphinstone Island Bay; Sullivan Island, 4-5 and 7-10 fathoms; Owen Island. *Mergui, Ceylon, Singapore, China Sea.*

#### SOLARIIDÆ. |

216. SOLARIUM PERSPECTIVUM, L., Kiener, pl. 1; Reeve, *Conch. Icon.* xv. pl. ii. fig. 11.

Laloona Bay, Elphinstone Island; Sullivan Island, 4 fathoms. *Red Sea, Madagascar, Zanzibar, Moluccas, Salang, Singapore, Java.*

#### EULIMIDÆ.

217. EULIMA MARTINII, Adams, Sowerby, *Thes.* fig. 8; Reeve, *Conch. Icon.* xv. pl. i. fig. 6.

King Island Bay, littoral. *Ceylon.*

218. EULIMA (LEIOSTRACA) BIVITTATA, Reeve, *l. c. xv. Leiostraca*, pl. i. fig. 6.

*Eulima bilineata*, Adams and Reeve, *Zool. Voy. 'Samarang,' Moll.* p. 52, pl. 11. fig. 24. (Not *bilineata*, Alder.)

Sullivan Island, 7-10 fathoms. *Sooloo Sea.*

219. *STILIFER*, sp. indet.

Elphinstone Island Bay, in the ambulacral groove of a Starfish (*Goniaster*).

## NERITIDÆ.

220. *NERITA COSTATA*, Chemnitz, *Conch.-Cab.* vol. v. figs. 1966, 1967; Reeve, *Conch. Icon.* ix. pl. ii. fig. 6; Martens-Küster, *Monogr. Nerita*, pl. 4. figs. 8–11.

Crow Islet west of King Island; Sullivan Island, littoral. *Nicobars, Singapore, Java, east and west coast of Australia, Philippines, Carolines.*

221. *NERITA CHAMÆLEO*, L., Hanley, *Ipsa Linn. Conch.* pl. iv. fig. 8; Hombron & Jacquinot, *Voy. Pôle Sud, Moll.* pl. 16. figs. 1–6; Sowerby, *Thes.* iii. figs. 93–99; Martens-Küster, *Nerita*, pl. 5. figs. 5–15.

*Nerita stella*, Chemnitz, Reeve, *l. c.* ix. pl. xiii. fig. 60.

Very variable in colour.

King Island Bay, littoral; Crow Islet, between King Island and Hayes Island, at high-water level; Elphinstone Island; Owen Island. *Vizagapatam, Nicobars, Singapore, Gulf of Siam, Java, Celebes, Moluccas, Philippines, Hongkong, Samoa Islands.*

222. *NERITA ALBICILLA*, L., Chemnitz, *Conch.-Cab.* vol. v. fig. 2000 *a–h*; Quoy & Gaimard, *Voy. 'Astrolabe'*, pl. 65. figs. 17, 18; Reeve, *l. c.* ix. pl. xv. fig. 64.

King Island, littoral; Crow Islet, between King Island and Hayes Island, at high water; Elphinstone, Sullivan, and Owen Islands. *Natal, Mozambique, Mauritius, Seychelles, Persian Gulf, Ceylon, Nicobars, Singapore, Java, Celebes, Philippines, China, Japan, New Guinea, Samoa, Tonga, Tahiti.*

223. *NERITA POLITA*, L., Chemn. *Conch.-Cab.* v. figs. 2002–2012; Reeve, *l. c.* ix. pl. i. fig. 2.

King Island Bay, littoral; Crow Islet, between King Island and Hayes Island, at high water; Elphinstone Island Bay; Malcolm Island, littoral; Sullivan Island, high water; Owen Island. *Mauritius, Natal, Ormuz Island, Ceylon, Nicobars, Java, Moluccas, Timor, Philippines, Aru and Solomon Islands, Hongkong.*

*NERITA LINEATA* and *PLANOSPIRA*. See above, nos. 54, 55.

## TROCHIDÆ.

224. TURBO MARMORATUS, *L.*, *Kiener*, pls. 1, 2; *Quoy & Gaimard*, *Voy. 'Astrolabe'*, pl. 59. figs. 10-16; *Reeve*, *l. c. iv.* pl. i. fig. 2.

North of Elphinstone Island. *Seychelles, Moulmein, Celebes, Moluccas, New Guinea.*

225. TURBO MARGARITACEUS, *L.*, *Chemnitz*, *Conch.-Cab.* v. fig. 1762.

*Turbo crassus*, *Gray*, *Reeve*, *l. c. iv.* pl. iii. fig. 10.

Rangoon; Crow Islet, between King Island and Hayes Island, at high water; Elphinstone Island Bay; Owen Island. *Mauritius, Seychelles, Moluccas.*

226. TURBO ARGYROSTOMUS, *L.*, *Kiener*, pls. 37, 38.

*Turbo margaritaceus*, *Reeve*, *l. c. iv.* pl. vii. fig. 29.

Owen Island. *Ceylon.*

227. TURBO CONCINNUS, *Philippi-Küster*, *Monogr. Turbo*, pl. 11. fig. 6.

*Turbo articulatus*, *Reeve*, *l. c. iv.* pl. ix. fig. 39.

Elphinstone Island; Sullivan and Owen Islands. *Siam, Zanzibar, Ceylon.*

228. TURBO (LUNELLA) PORPHYRITES, *Martyn*, *Universal Conchologist*, pl. 72; *Reeve*, *l. c. iv.* pl. xi. fig. 53.

*Turbo versicolor*, *Chemnitz*, *Kiener*, pl. 7. fig. 2.

Mergui; King Island; Crow Islet, between King Island and Hayes Island; Elphinstone Island Bay; Sullivan Island, littoral; Owen Island. *Ceylon, Nicobars, Java, Timor, Moluccas, Philippines, New Ireland.*

229. DELPHINULA LACINTATA, *Lam.*, *Kiener*, pl. 1. fig. 1; *Reeve*, *Conch. Icon.* i. pl. ii. fig. 9.

Forbes Island. *Ceylon, Java, Celebes, New Ireland, Philippines, Moluccas.*

230. DELPHINULA ATRATA, *Chemnitz*, *Kiener*, pl. 2. fig. 1 a; *Reeve*, *l. c. i.* pl. i. fig. 4.

Mergui; Elphinstone Island Bay. *Ceylon, Salang, Singapore, Bintang, Philippines, Moluccas.*

231. CYCLOSTREMA REEVEANUM, *Hinds*, *Voy. 'Sulphur'*, pl. 16. fig. 17; *Reeve*, *l. c. i.* *Delphinula*, pl. iv. fig. 87, and xix. pl. ii. fig. 13.

King Island Bay, littoral. *Malacca.*

232. TROCHUS NILOTICUS, L., *Chemnitz, Conch.-Cab.* v. figs. 1605 & 1614; *Kiener*, pl. 10; *Quoy & Gaimard, Voy. 'Astrolabe'*, pl. 62. fig. 12. (Not *Reeve*, *l. c.* xiii. pl. i. fig. 3a, which represents *T. maximus*, Koch. See *Ann. & Mag. Nat. Hist.* (3) xx. 1867, p. 97.)

Largest specimen 110 millim. high, 126 millim. broad at the base.

Elphinstone Island Bay and Sullivan Island. *Ceylon, Nicobars, Singapore, Celebes, New Ireland.*

233. TROCHUS (OBELISCUS) PYRAMIS, *Born.*

*Trochus obeliscus, Gmelin, Chemnitz, Conch.-Cab.* v. fig. 1510; *Quoy & Gaimard, Voy. 'Astrolabe'*, pl. 61. figs. 19, 20; *Kiener*, pl. 19. fig. 1; *Reeve, l. c.* xiii. pl. ii. fig. 8.

Mergui; Elphinstone Island Bay and Sullivan Island. *Ceylon, Singapore, Celebes, Philippines, New Ireland, Tonga.*

234. TROCHUS (POLYDONTA) MACULATUS, L., *Chemnitz, Conch.-Cab.* v. figs. 1615–1624; *Kiener*, pl. 29. fig. 1; *Reeve, l. c.* xiii. pl. i. fig. 4.

Mergui, Sullivan Island, and Owen Island. *Singapore, Ceylon, Moluccas, Mozambique, Philippines, Timor, Port Essington.*

235. TROCHUS (POLYDONTA) COSTATUS, *Gmelin, Chemnitz, Conch.-Cab.* v. figs. 1643, 1644.

*Trochus maculatus, var., Kiener, pl. 29. fig. 1a.*

*Trochus tentorium, Reeve, loc. cit. xiii. pl. iii. fig. 14.*

Granules confluent in vertical rows.

Elphinstone Island. *Ceylon, Nicobars.*

236. TROCHUS (POLYDONTA) CONCINNUS, *Philippi, Zeitschr. Mal.* 1846, p. 105; *Küster, Monogr. Trochus*, pl. 16. fig. 1; *Reeve, l. c.* xiii. pl. iii. fig. 15.

*Trochus tubiferus, Kiener, pl. 37. fig. 3 (1852).*

The granules of the lowest row above the suture increasing to large tubercles.

Owen Island. *Mauritius.*

237. TROCHUS (POLYDONTA) RADIATUS, *Gmelin, Chemnitz, Conch.-Cab.* v. fig. 1642; *Reeve, l. c.* xiii. pl. xiv. fig. 80; *Kiener, Fischer*, pl. 97. fig. 1.

Owen Island. *Madagascar, Ceylon, Java, Philippines.*

238. CLANCOLUS ATROPURPUREUS, *Gould, U. S. Exploring Exped., Moll.* fig. 224, p. 189.

King Island; Owen Island; Sullivan Island. *Samoa Islands.*

239. MONODONTA LABIO, L., *Chemnitz, Conch.-Cab.* v. figs. 1579, 1580; *Philippi-Küster, Trochus*, pl. 27. figs. 1-3; *Woodward, Man. Moll.* pl. 10. fig. 11.

King Island, littoral; Crow Islet, between King and Hayes Islands, at high water; Elphinstone Island; Sullivan Island. *Singapore, Madagascar, Seychelles, Ceylon, Nicobars, Celebes, Moluccas, Philippines, Hongkong, North Australia.*

240. MONODONTA CANALIFERA, Lam. *Encycl. Méth., Vers*, pl. 447. fig. 5; *Quoy & Gaimard, Voy. 'Astrolabe'*, pl. 64. figs. 26-29.

Mergui; Owen Island. *Philippines, Moluccas, Timor, New Ireland.*

241. MONODONTA (EUCHELUS) SCABRA, *Philippi-Küster, Monogr. Trochus*, p. 262, pl. 39. fig. 2.

King Island, 7 fathoms †.

242. MONODONTA (EUCHELUS) QUADRICARINATA, *Chemnitz, Conch.-Cab.* vol. xi. figs. 1892, 1893.

King Island, littoral. *Hongkong.*

243. MONODONTA (EUCHELUS) TRICARINATA, Lam., *Delessert, Recueil Coq.* pl. 36. fig. 8; *Philippi*, pl. 27. fig. 8.

Monodonta multicarinata, *Quoy & Gaimard, Voy. 'Astrolabe'*, pl. 63. figs. 25-27.

Sullivan Island. *Australia.*

244. GIBBULA (MINOLIA) BIANGULOSA, *Adams, Proc. Zool. Soc.* 1856, p. 49.

*Margarita triangulosa, Reeve, Conch. Icon.* vol. xx. pl. iii. fig. 26.

Sullivan Island, 7-10 fathoms. *Siam.*

245. CHRYSOSTOMA NICOBARICUM, *Gmelin, Chemnitz, Conch.-Cab.* v. figs. 1822-1825; *Reeve, l. c. iv. Turbo*, pl. xi. fig. 48.

Owen Island. *Singapore, Banka, Celebes, Moluccas, Philippines.*

246. ROTELLA VESTIARIA, L., *Reeve, l. c. xx.* pl. iii. fig. 12.

*Rotella lineolata, Lam., Kiener.*

Rocky islet, King Island Bay. *Madras, Ceylon, Singapore, Java, Philippines, New Ireland.*

247. ISANDA PULCHELLA, A. Adams, *P. Z. S.* 1853, p. 190. (Pl. XVI. fig. 3, 'a-e.) Testa sublenticularis, obtuse angulata, umbilicata, laevis, nitida, griseo-straminea, supra lineolis pallide

viridi-fuscis angulosis, saepius in strigas latiores confluentibus, infra maculis albis picta; spira prominula, apice acutiuscula, albida; basi prope umbilicum latiusculum perspectivum radiatim corrugata et angulata; apertura subrhombica, valde obliqua, fave margaritacea; peristome recto, obtuso, albido, margine basali arcuato, margine columellari in callum linguiformem roseum umbilici partem obtegentem expanso. Diam. maj. 7 millim., min.  $5\frac{1}{2}$ , alt. 4; apert. diam. 3 millim., alt. 2.

Owen Island, 7 fathoms. *Mindoro.*

A pretty little shell which, so far as I know, has not been figured hitherto. At first sight it appears to be a young *Rotella vestiaria*, L. (*lineolata*, Lam.); but even in the smallest specimens of *Rotella* which I have at my disposal, which are of the same size as this *Isanda*, the umbilicus is completely filled up by the callosity, whereas in the largest specimens of the present species the umbilicus is only covered halfway, and in smaller ones gradually less, or even not at all. The general aspect of the shell, however, is much more that of *Rotella* than that of the species of *Isanda* hitherto figured (Adams, Gen. Moll. pl. 46. fig. 2; Chenu, Manuel de Conchyliologie, i. p. 354, *I. coronata*; Reeve, Conch. Icon. vol. xix. Cyclostrema, pl. iii. fig. 23, *C. crenulifera*).

#### FISSURELLIDÆ.

248. FISSURELLA RUEPPELLI, *Sowerby, Conch. Illustr.* fig. 75; *Reeve, Conch. Icon.* vi. fig. 54.

King Island, littoral. *Red Sea, Mauritius.*

249. SCUTUM UNGUIS, L., *Hanley, Ipsa Linn. Conch.* p. 425, pl. iii. fig. 4.

*Scutus corrugatus, Reeve, Conch. Icon.* xvii. pl. ii. fig. 3.

King Island, sublittoral. *Mauritius, Singapore, Australia.*

#### PATELLIDÆ.

250. PATELLA VARIEGATA, *Reeve, Conchologia Systematica*, pl. 136. fig. 1; *Conch. Icon.* viii. pl. xvi. fig. 36.

Sullivan Island. *Red Sea, Mauritius, Nicobars, Java, Moluccas, Australia.*

251. PATELLA STELLÆFORMIS, *Reeve, Conch. Syst.* pl. 136. fig. 3.

*Patella pentagona (non Born), Reeve, Conch. Icon.* viii. pl. xx. fig. 48 a-c.

Chalky white, with very unequal ribs and scattered black spots between them.

Sullivan Island, littoral. *Philippines, Polynesian Islands.*

#### POLYPLACOPHORA.

252. CHITON (ACANTHOPLEURA) SPINIGER, *Sowerby, Conch. Illustr.* fig. 68; *Reeve, Conch. Icon.* iv. pl. xiv. fig. 75.

King Island and Crow Islet between King Island and Hayes Island; Sullivan Island; Owen Island. *Red Sea, Zanzibar, Nicobars, Java, Timor, Philippines, New Guinea, Northern Australia.*

253. CHITONELLUS FASCIATUS, *Lam., Quoy & Gaimard, Voy. 'Astrolabe,'* pl. 73. figs. 21–29; *Reeve, l. c. iv. pl. i. fig. 2.*

Sullivan Island. *Celebes, Moluccas, Timor, Australia, Tonga, New Ireland.*

#### c. GASTEROPODA OPISTHOBRANCHIA.

##### SIPHONARIIDÆ.

254. SIPHONARIA STELLATA, *Helbling in Abhandl. böhm. Priv. Gesellsch.* iv. 1779, pl. 1. fig. 11; *Martini-Chemnitz, Conch.-Cab.* i. figs. 88, 89 (*Lepas exigua aurantia* &c.).

*Siphonaria exigua, Sow. Gen. of Shells,* fig. 4.

*Siphonaria luzonica, Reeve, l. c. ix. pl. vi. fig. 29.*

King Island, littoral; Owen Island; Sullivan Island. *Nicobars, Singapore, Java, Celebes, Moluccas, Philippines, Vanikoro.*

##### TORNATELLIDÆ.

255. TORNATELLA SOLIDULA, *L., Kiener,* fig. 2; *Reeve, Conch. Icon.* xv. pl. i. fig. 3.

Laloon Bay, Elphinstone Island; Owen Island, 7 fathoms. *Mauritius, Seychelles, Ceylon, Singapore.*

##### BULLIDÆ.

256. BULLA AMPULLA, *Reeve, Conch. Icon.* xvi. pl. i. fig. 3.

Laloon Bay, Elphinstone Island; Owen Island. *Mauritius, Seychelles, Ceylon, Salang, Singapore, Java, Timor, Philippines.*

257. PHILINE APERTA, L., *Reeve, Conch. Icon.* xviii. pl. i. fig. 2.  
Sullivan Island, 4 to 7 fathoms. *Cape of Good Hope.*

### DORIDIDÆ.

258. PLATYDORIS SCABRA, Cuvier, *Mém. Doris (Ann. Mus. Hist. Nat. iv. 1804)*, p. 20; Quoy & Gaimard, *Voy. 'Astrolabe,' Zool. ii.* p. 258, pl. 18. figs. 1, 2.

King Island. *Celebes, New Guinea.*

259. DORIDOPSIS ATROMACULATA, Alder and Hancock, *Trans. Zool. Soc.* v. p. 129, pl. 31. figs. 20–24.

King Island, sublittoral. *Madras.*

260. DORIDOPSIS NIGRA, Stimpson, *Alder and Hancock, loc. cit.* p. 128, pl. 31. figs. 13–16.

King Island. *Madras, Ceylon, Loochoo Islands.*

261. CASELLA ATROMARGINATA, Cuvier, *loc. cit.* pl. 2. fig. 6.  
Casella philippensis, Bergh in *Semper Reis. Archip. Philipp.* vol. ii. pl. 33. fig. 1; Abraham, *Proc. Zool. Soc.* 1877, p. 229.

Elphinstone Island. *Philippines, Timor (v. Martens, 1863), New Guinea, Friendly Islands.*

### TRITONIIDÆ.

262. TRITONIA, sp. indet.

Elphinstone Island.

### d. SCAPHOPODA.

263. DENTALIUM EBURNEUM, L.

Dentalium politum (L.), Deshayes, *Monogr. in Mém. Soc. Hist. Nat. de Paris*, ii. 1825, p. 361, pl. 16. fig. 17; Reeve, *l. c.* xviii. pl. iii. fig. 16.

Dentalium annulatum, Sow.

Smooth, pale yellow, very elongated.

Sullivan Island, 7 fathoms. *Siam, Philippines.*

264. DENTALIUM VARIABILE, Deshayes, *loc. cit.* p. 352, pl. 16. fig. 30; Reeve, *Conch. Icon.* xviii. pl. iv. fig. 26.

White, solid, 5–9-angulated.

Mergui, mud-flats; Sullivan Island, 7–10 fathoms. *Philippines.*

## e. BIVALVIA.

## ANOMIIDÆ.

265. ANOMIA PLENILUNIUM, *Reeve*, *Conch. Icon.* xi. pl. i. fig. 2.  
King Island. *Borneo*.

266. PLACUNA SELLÀ, *L.*, *Rumph. Amb. Rar. Rar.* pl. 47. fig. B;  
*Chemnitz, Conch.-Cab.* viii. fig. 714; *Reeve, l. c.* xviii. pl. i. fig. 1.  
Dark purple, twisted.

King Island, in mud at low water at spring-tide. *Singapore*.

267. PLACUNA PAPYRACEA, *Lam.*, *Chemnitz*, viii. fig. 715; *Reeve, Conch. Icon.* xviii. pl. ii. figs. 2 b, c.

*Placenta quadrangularis, Retz.*

Purple-rayed, flat.

King Island. *Philippines, Australia*.

268. PLACUNA PLACENTA, *L.*, *Chemnitz*, viii. fig. 716; *Reeve, Conch. Icon.* xviii. pl. iii. fig. 3 d.

*Placenta orbicularis, Retz.*

Orbicular, flat, white.

King Island; Elphinstone Island; Sullivan Island. *Ceylon, Singapore, Philippines, China, North Australia*.

## OSTREIDÆ.

269. OSTREA SINENSIS, *Gmelin*, *Chemnitz, Conch.-Cab.* viii. fig. 668; *Reeve, Conch. Icon.* xviii. pl. iii. fig. 5.

A large dark-coloured specimen, 200 millim. long, 150 millim. broad.

Elphinstone Island; King Island. *China Sea*.

270. OSTREA PERMOLLIS, *Sow.*, *Reeve, l. c.* xviii. pl. x. fig. 18?  
King Island Bay; specimen fixed on *Pinna vexillum*.

271. OSTREA (ALECTRYONIA) TURBINATA, *Lam.*, *Reeve, l. c.* xviii. pl. xiv. fig. 29.

King Island; Sullivan Island. *Red Sea, Mozambique*.

272. OSTREA CRENULIFERA, *Sow.*, *Reeve, l. c.* xviii. pl. xxvii. fig. 67.

Mergui. *Red Sea*.

The species nos. 60–64, pp. 172–173, may be referred to here; and also *Ostrea cucullata*, Born, may be mentioned, as it occurs in the collection from truly marine localities, attached to the shells of a number of different species.

## SPONDYLIDÆ.

273. SPONDYLOS PLURISPINOSUS, *Reeve*, *l. c.* ix. pl. v. fig. 18.  
Elphinstone Island. *Philippines*.  
  
274. PLICATULA DEPRESSA, *Lam.*, *Chemnitz, Conch.-Cab.* viii.  
fig. 482; *Sowerby, Thesaur.* i. pl. 90. fig. 7; *Reeve, l. c.* xix. pl. ii.  
fig. 7.  
King Island. *Singapore*.

## PECTINIDÆ.

275. PECTEN PORPHYREUS, *Chemnitz, Conch.-Cab.* viii. fig. 632.  
*Pecten senatorius, Reeve, l. c.* viii. pl. xxi. fig. 81.  
The ribs are tripartite; whereas they are simple in the true  
*P. senatorius*, Chemn.  
King Island. *Red Sea, Mauritius, Salang, Moluccas*.  
  
276. PECTEN HISTRIONICUS, *L.*, *Chemnitz*, viii. fig. 614;  
*Sowerby, Thes.* fig. 240; *Reeve, l. c.* viii. pl. xxix. fig. 130.  
King Island. *Ceylon*.

277. PECTEN (VOLA) PYXIDATUS, *Born, Test. Mus. Cæs. Vindob.*  
pl. 6. figs. 5, 6; *Philippi, Abbild. Pecten*, pl. 1. fig. 2; *Sowerby, Thes.* figs. 34, 35; *Reeve, l. c.* viii. pl. xxiv. fig. 96.  
Upper valve brown, spotted with white.  
King Island, mud-banks exposed at spring-tide; Sullivan  
Island, 6 fathoms. *Tranquebar, Philippines, China, Australia*.

278. LIMA SQUAMOSA, *Lam., Chemnitz*, viii. fig. 650; *Sowerby, Thes.* figs. 1 & 18; *Reeve, l. c.* xviii. pl. ii. fig. 10.  
Number of ribs somewhat variable.  
Mergui; King Island; Elphinstone Island. *Tranquebar, Ceylon, Singapore*.

279. LIMA (MANTELLUM) FRAGILIS, *Gmel., Chemnitz*, viii.  
fig. 650; *Sow. Thes.* figs. 34–36; *Reeve, l. c.* xviii. pl. iv. fig. 18.  
Lima linguatula, *Lam.*  
King Island; Elphinstone Island; Owen Island, littoral.  
*Nicobars, Singapore, Timor, New Guinea, Kingsmill Islands*.

## AVICULIDÆ.

280. AVICULA (MELEAGRINA) MARGARITIFERA, *L. (Pearl Oyster); Chemnitz*, viii. fig. 718; *Reeve, l. c.* x. pl. viii. fig. 21.

Large specimens 25 centim. broad, 19 millim. high. Edges yellowish, not blackish as in Australian specimens (*Reeve, l. c. x. pl. i. fig. 1*).

Elphinstone Island; Owen Island. *Red Sea, Mauritius, Madras, Ceylon, Andamans.*

281. AVICULA ATROPURPUREA, *Dunker, Monogr. Avicula in Küster's Conch.-Cab. pl. 3. fig. 3.*

Shell rather square, dark-coloured.

Elphinstone Island †.

282. AVICULA CHEMNITZII, *Philippi, Zeitschr. f. Malak. Zool. 1849, p. 20; Chemnitz, Conch.-Cab. viii. fig. 720; Dunker, Monogr. pl. 3. fig. 5.*

*Avicula praetexta, Reeve, Conch. Icon. x. pl. vii. fig. 15.*

Shell orbicular, hinder wing very prominent.

Elphinstone Island. *China Sea.*

283. AVICULA SCABRIUSCULA, *Reeve, l. c. x. pl. xiv. fig. 54.*

Obliquely elongated, covered with a net-like fibrous pale-brown periostracum, the scale-like prominences of which are comparatively much longer in young than in full-grown specimens.

King Island; Elphinstone Island. *Australia.*

284. PERNIA EPHIPPUM, *L., Chemnitz, vii. fig. 576.* (Not *Reeve, l. c. xi. pl. ii. fig. 8*, which is a species from the West Indies.)

Mergui; King Island, on rocks; Crow Islet between King and Hayes Islands, beneath stones; Kisseraing Island. *Mozambique, Mauritius, Nicobars, Singapore, Celebes, Philippines, West Australia.*

285. PERNIA ISOGNOMON, *L., Chemnitz, vii. figs. 582-584; Reeve, Conch. Icon. xi. pl. v. fig. 24.*

The relative length of the arm-like prolongation of the shell is very variable.

King Island; Elphinstone Island; Owen Island; Sullivan Island, coral bottom; Lampee. *Mozambique, Singapore, Philippines.*

286. PERNIA SPATULATA, *Reeve, Conch. Icon. xi. pl. vi. fig. 28.*

Oblong-oval.

King Island; Elphinstone Island. *Philippines.*

287. PERNA LEGUMEN, *Gmelin*, *Chemnitz*, vii. fig. 578; *Reeve*, *Conch. Icon.* xi. pl. v. fig. 22.

Shell narrow, elongate, whitish.

Owen Island, coral-burrows. *Nicobars, Polynesia.*

288. PERNA COSTELLATA, *Conrad*, *Reeve*, l. c. xi. pl. iv. fig. 16.

With the preceding.

Owen Island. *Society Islands.*

289. MALLEUS DÆMONIACUS, *Reeve*, l. c. xi. pl. ii. fig. 6.

With the two preceding.

Owen Island. *Singapore.*

290. VULSELLA LINGUA-FELIS, *Reeve*, l. c. xi. pl. ii. fig. 13.

King Island; Elphinstone Island †.

#### PINNIDÆ.

291. PINNA FUMATA, *Hanley*, *Reeve*, l. c. xi. pl. xv. fig. 27.

Locality not stated. *Philippines.*

292. PINNA ATROPURPUREA, *Sow.*, *Reeve*, l. c. xi. pl. xxii. fig. 41.

King Island. *Moluccas.*

293. PINNA (ATRINA) NIGRINA, *Lam.*, *Chemnitz*, viii. fig. 714; *Reeve*, l. c. xi. pl. iii. fig. 4.

King Island and Owen Island. *Mozambique, Philippines, New Guinea, New Caledonia.*

294. PINNA (ATRINA) VEXILLUM, *Born*, *Test. Mus. Cæs. Vindob.* pl. 7. fig. 3; *Chemnitz*, viii. fig. 783; *Reeve*, l. c. xi. pl. xix. fig. 36.

The limits between this and the preceding species are not quite definite.

King Island and Elphinstone Island. *Singapore, Philippines.*

295. PINNA (PENNARIA) HANLEYI, *Reeve*, l. c. xi. pl. viii. fig. 15. *Pinna pectinata (L.)*, *Chemnitz*, viii. fig. 770.

Elphinstone Island. *Moluccas.*

296. PINNA (CYRTOPINNA) INCURVATA, *Chemnitz*, viii. fig. 778; *Reeve*, l. c. xi. pl. v. fig. 8.

King Island; Elphinstone Island. *Nicobars, Banka, Moluccas.*

297. PINNA (CYRTOPINNA) BICOLOR, *Chemnitz*, viii. fig. 780; *Reeve*, l. c. xi. pl. ix. fig. 17.

*Pinna dolabrata, Lam.*

King Island. *Red Sea, Malacca, Moluccas.*

298. PINNA (CYRTOPINNA) MADIDA, *Reeve*, *l. c.* xi. pl. xvii. fig. 31.  
Elphinstone Island. *Port Essington.*

The last three species are very near to one another.

### MYTILIDÆ.

299. MYTILUS VIRIDIS, *L.*

*Mytilus smaragdinus*, *Chemnitz*, viii. figs. 745, 746; *Reeve*, *l. c.* x. fig. 28.  
Mergui; King Island; Sullivan Island. *Tranquebar, Ceylon,*  
*Singapore, Siam, Borneo.*

300. MYTILUS (AULACOMYA) CURVATUS, *Dunker*, *Reeve*, *l. c.* x.  
pl. xi. fig. 53. (Pl. XVI. fig. 4, *a-d.*)

Varies considerably in outline in the same locality, some specimens being rather straight, others distinctly curved in different degrees. The curvature is probably caused by the position of the individual shell between its neighbours or other objects.

Crow Islet between King Island and Hayes Island, beneath stones at highest water-level; Elphinstone Island. *Philippines.*

301. MYTILUS (SEPTIFER) BILOCULARIS, *L.*, *Chemnitz*, viii.  
figs. 736, 737.

*Mytilus nicobaricus*, *Reeve*, *l. c.* x. pl. ix. fig. 42.

Bluish green inside.

King Island; Elphinstone Island; Owen Island, coral-burrows. *Red Sea, Mauritius, Ceylon, Nicobars, Salang, Singapore, Australia, Japan.*

302. MYTILUS (SEPTIFER) EXCISUS, *Wiegmann*, *Archiv f. Naturgeschichte*, 1837, p. 49 (Tichogonia); *Reeve*, *l. c.* x. pl. iv. fig. 13.

*Septifer fuscus*, *Récluz*, *Revue Zool.* 1848.

Inside dark purple and white.

Owen Island. *Mauritius, Mozambique.*

303. MYTILUS (?SEPTIFER) ANDERSONI, sp. n. (Pl. XVI. fig. 5.)  
Testa rhombeo-trigona, præter strias incrementi lævis, nitida, olivacea; intus olivacea; marginis dorsalis pars tertia anterior valde ascendens, fere rectilinea, reliquum rotundatum, sensim descendens; margo ventralis fere horizontalis rectilineus; facies ventralis paullum concava, angulo tumido sat distincto circumscripta; septum simplex, margine libero leviter concavo, appendice nulla. Long. 16, alt. 9, crass. 8 millim.

The locality of this apparently new species is distinctly stated

as marine by the label "Lampee, 7 fathoms, 14. 1. 82." Nevertheless the whole appearance of the shell is that of the genus *Dreissena*, which lives in fresh and brackish water. The marine subgenus *Septifer*, which agrees with *Dreissena* in the presence of a septum on the inside of the umbones, is further distinguished by radial furrows at the outside, which are wanting in our species. But the essential difference between both genera is in the soft parts, the edges of the mantle being united for some extent on the basal part in *Dreissena*, whereas in *Septifer* they are quite free in that region. In one of Dr. Anderson's specimens portions of the mantle in the dry state are present and show no trace of coalescence at the lower side. For this reason, and also from its habitat, this species is to be referred to *Septifer* until further evidence is forthcoming.

*D. carinata*, Dunker, Dissert. de *Septiferis et Dreissenis*, 1885, p. 15, seems, according to the description, rather near to this species; but on comparing the type in Dunker's collection it is found to be a much smaller shell, of much narrower shape, and different coloration.

304. MODIOLA GLABERRIMA, *Dunker*, P. Z. S. 1856, p. 363; *Reeve*, Conch. Icon. x. pl. viii. fig. 48.

Elphinstone Island. *Canton, Australia.*

305. MODIOLARIA ARCUATULA, *Hanley*, *Reeve*, l. c. x. *Modiola*, pl. vi. figs. 27 & 28.

Elphinstone Island. *Singapore.*

306. MODIOLARIA NANA, *Dunker*, *Reeve*, l. c. x. *Modiola*, pl. x. fig. 69.

Sullivan Island, 6 fathoms. *Port Lincoln (Australia).*

307. LITHODOMUS GRACILIS, *Philippi*, Abbild. *Modiola*, pl. 2. fig. 1; *Reeve*, l. c. x. pl. i. fig. 4.

Elphinstone Island. *Malacca, China Sea.*

308. LITHODOMUS TERES, *Philippi*, loc. cit. pl. 1. fig. 3.

Elphinstone Island; Sullivan Island; Owen Island, in coral. *Mauritius, Seychelles, Pacific.*

309. LITHODOMUS NASUTA, *Philippi*, loc. cit. pl. 1. fig. 2; *Reeve*, l. c. x. pl. ii. fig. 10.

Owen Island, coral-burrows. *Zanzibar, Japan; also in the Atlantic.*

310. LITHODOMUS MALACCANA, *Hanley*, *Reeve*, l. c. x. pl. iv. fig. 20. Sullivan Island and Owen Island, in coral. *Malacca.*

311. LITHODOMUS (BOTULA) CINNAMOMEA, *Lam.*, *Chemnitz*, viii. fig. 731; *Reeve*, *l. c.* x. pl. i. fig. 5.

Owen Island, coral-burrows. *Red Sea, Mauritius, Nicobars, Philippines.*

#### ARCIDÆ.

312. ARCA KRAUSSI, *Philippi*, *Abbild.* pl. 5. figs. 8–10; *Krauss, Südafr. Moll.* pl. 1. fig. 13.

Allied to *A. maculata*, *Sow.*, *Reeve, Conch. Icon.* ii. pl. xi. fig. 71. King Island. *Natal.*

313. ARCA SYMMETRICA, *Reeve*, *l. c.* ii. pl. xvii. fig. 117.

King Island, beneath stones at highest water-mark; Elphin stone Island; Kisseraing. *Singapore, Philippines.*

314. ARCA (BARBATIA) FUSCA, *Bruguière*, *Chemnitz*, vii. fig. 535; *Reeve*, *l. c.* ii. pl. xii. fig. 82.

Elphinstone Island; Owen Island, among old corals. *Red Sea, Seychelles, Singapore, Celebes, North Australia.*

315. ARCA (BARBATIA) SETIGERA, *Reeve*, *l. c.* ii. pl. xiv. fig. 94 Sullivan Island, 6 fathoms. *Zanzibar.*

316. ARCA (BARBATIA) VELATA, *Sow.*, *Reeve, l. c.* ii. pl. xii. fig. 79; *Dunker, Novitates*, pl. 41.

King Island, littoral; Laloon Bay, Elphinstone Island. *Madras.*

317. ARCA (BARBATIA) DECUSSATA, *Sow.*, *Reeve, l. c.* ii. fig. 81.

Very variable in outline, according to the individual position.

Elphinstone Island; Sullivan Island; Owen Island, burrows in old corals; Allen Island. *Red Sea, Mauritius, Ceylon, Salang, Singapore, Celebes, Philippines, New Zealand, Viti and Paumotu Islands.*

318. ARCA (BARBATIA) SIGNATA, *Dunker, Novitates*, pl. 38. figs. 3–5.

King Island †.

319. ARCA (ANADARA) GRANOSA, *L.*, *Rumph. Amb. Rar.* pl. 44. fig. K; *Chemnitz*, vii. fig. 557; *Reeve, l. c.* ii. pl. iii. fig. 15.

Mergui, mud-flats; Crow Islet, between King Island and Hayes Island, at high-water level; Kisseraing. *Tranquebar, Nicobars, Singapore, Java, Celebes.*

320. ARCA (ANADARA) RHOMBEA, *Born*, *Chemnitz*, *Conch.-Cab.*  
vii. fig. 553a; *Reeve*, *l. c.* ii. pl. ii. fig. 12.

Elphinstone Island. *Madras, Ceylon, Salang, China Sea.*

321. ARCA (ANADARA) PILULA, *Reeve*, *l. c.* ii. pl. ii. fig. 8.

The height almost exceeds the length of the shell.

Sullivan Island, 7–10 fathoms. *Java, Philippines.*

322. ARCA (SCAPHARCA) INÆQUIVALVIS, *Bruguière*, *Chemnitz*,  
vii. fig. 552; *Reeve*, *l. c.* ii. pl. viii. fig. 54.

*Area hispida*, *Philippi*, *Abbild.* pl. 5. fig. 2.

The number of ribs varies from 28 to 32; where the periostracum (younger state) is preserved, the interstices between the ribs seem narrower than the ribs; if the former is removed, ribs and interstices are about equally broad.

King Island, Elphinstone Island, and Sullivan Island. *Salang, Timor, Philippines.*

323. CUCULLÆA CONCAMERATA, *Chemnitz*, vii. figs. 526–528;  
*Reeve*, *l. c.* xvii. pl. i. fig. 1.

King Island, mud-banks exposed at spring-tide. *Tranquebar, Ceylon, Nicobars, China.*

324. PECTUNCULUS PECTINIFORMIS, *Lam.*, *Reeve*, *l. c.* i. pl. iii.  
fig. 11.

*Area pectunculus*, *Linné*, *Chemnitz*, vii. figs. 568–569.

King Island. *Zanzibar, Ceylon, Philippines.*

### NUCULIDÆ.

325. LEDA MAURITIANA, *Sow.*, *Reeve*, *l. c.* xviii. pl. vi. fig. 33.

Sullivan Island, 7–10 fathoms. *Mauritius, Ceylon, China Sea.*

### ASTARTIDÆ.

326. CARDITA VARIEGATA, *Bruguière*, *Chemnitz*, *Conch.-Cab.* xi.  
figs. 1999–2002; *Reeve*, *l. c.* i. pl. i. fig. 3.

*Cardita calyculata*, *Lam.*, not *L.*

Owen Island, coral-burrows. *Red Sea, Seychelles, Zanzibar, Ceylon, Nicobars, Singapore.*

327. CRASSATELLA RADIATA, *Sow.*, *Reeve*, *l. c.* i. pl. iii. fig. 12.

King Island; Elphinstone Island, sand-flats; Sullivan Island,  
4 and 7–10 fathoms. *Singapore.*

The rays are very faint or scarcely discernible in these specimens

## LUCINIDÆ.

328. LUCINA (LENTILLARIA) DIVERGENS, *Philippi*, *Abbild.* vol. iii. Luc. pl. 2. fig. 4, April 1850.

*Lucina fibula*, *Reeve*, *l. c.* vol. vi. pl. vii. figs. 33, 37, & 38, June 1850.

Owen Island, sand. *Red Sea, Persian Gulf, Philippines, Samoa and Viti Islands, Japan.*

329. LUCINA (subg. s. str.) PISUM, *Reeve*, *l. c.* vi. pl. xi. fig. 66. Small, subglobular, densely cancellated, white.

Sullivan Island, 7-10 fathoms. *Singapore, Port Essington.*

330. LUCINA (subg. s. str.) GEMMA, *Reeve*, *l. c.* vi. pl. xi. fig. 64. Small, compressed, concentrically laminated, white.

Associated with the preceding. Sullivan Island. *Philippines.*

LUCINA (ANODONTIA) EDENTULA and L. PHILIPPINARUM. See before, pp. 173, 174, nos. 65, 66.

## CHAMIDÆ.

331. CHAMA LAZARUS, *L.*, *Chemnitz*, vii. figs. 507, 509; *Reeve, Conch. Icon.* iv. pl. ii. fig. 4.

*Chama damæcornis*, *Lam.*

Elphinstone Island; Owen Island. *Mauritius, Bintang, Philippines.*

332. CHAMA BRASSICA, *Reeve*, *l. c.* iv. pl. vi. fig. 31; *Chemnitz*, vii. figs. 510, 514.

King Island; Elphinstone Island; Owen Island; Pilai Bay. *Nicobars, Moluccas, Philippines.*

333. CHAMA CRISTELLA, *Lam.*, *Reeve*, *l. c.* iv. pl. viii. fig. 42.

Broadly affixed by about half the surface of one valve.

Owen Island, burrows in old corals. *Java, Celebes.*

## TRIDACNIDÆ.

334. TRIDACNA SQUAMOSA, *Lam.*, *Reeve*, *l. c.* xiv. pl. iii. fig. 3. King Island, on rocks. *Red Sea, Nicobars, Singapore, Timor, Vanikoro.*

335. TRIDACNA CROCEA, *Lam.*, var. CUMINGII, *Reeve*, *l. c.* xiv. pl. vii. fig. 7.

Owen Island. *Singapore, Philippines, Moluccas, New Ireland.*

## CARDIIDÆ.

336. CARDIUM (TRACHYCARDIUM) RUGOSUM, *Lam.*, *Chemnitz*, v. fig. 191.

*Cardium flavum* (*L.* ?), *Reeve*, *Conch. Icon.* ii. pl. xiv. fig. 68.

King Island; Elphinstone Island; Owen Island. *Red Sea*, *Mozambique*, *Ceylon*, *Nicobars*, *Salang*, *Singapore*, *Moluccas*, *Philippines*.

337. CARDIUM (HEMICARDIUM) UNEDO, *L.*, *Chemnitz*, vi. figs. 168, 169; *Reeve*, *l. c.* ii. pl. ii. fig. 13.

Elphinstone Island. *Mauritius*, *Madras*, *Ceylon*, *Nicobars*, *Singapore*, *Bintang*, *Java*, *Moluccas*, *Philippines*.

338. CARDIUM (HEMICARDIUM) SUBRETUSUM, *Sow.*

*Cardium retusum* (*L.* ?), *Reeve*, *l. c.* ii. pl. xix. fig. 103.

Elphinstone Island, mud-flats. *Seychelles*, *Tranquebar*, *Singapore*, *China Sea*.

339. CARDIUM (subgen. nov.?) LATUM (*Born* ?), *Chemnitz*, vi. figs. 192, 193; *Reeve*, *l. c.* ii. pl. iv. fig. 21.

King Island. *Tranquebar*, *Nicobars*, *Ceylon*, *Java*, *Philippines*.

340. CARDIUM (BUCARDIUM) CORONATUM, *Spengler*, 1786; *Schroeter*, *Einleitung Conch.* iii. pl. 7. fig. 13.

*Cardium fimbriatum*, *Wood*, *Reeve*, *l. c.* ii. pl. xviii. fig. 91.

Elphinstone Island; Sullivan Island, 2-7 fathoms. *China Sea*.

341. CARDIUM (PAPYRIDEA) RUGATUM, *Gronov.*, *Reeve*, *Conch. Icon.* ii. pl. xii. fig. 63.

*Cardium apertum*, *Chemnitz*, vi. figs. 181-183.

Elphinstone Island. *Singapore*, *Philippines*, *New Britain*.

342. CARDIUM (PAPYRIDEA) PULCHRUM, *Sow.*, *Reeve*, *l. c.* ii. pl. xix. fig. 98.

Sullivan Island. *Seychelles*, *Mauritius*, *Salang*, *China Sea*, *Zanzibar*.

## VENERIDÆ.

343. CIRCE SCRIPTA, *L.*, *Chemnitz*, *Conch.-Cab.* vii. fig. 316; *Sowerby*, *Thes.* vol. ii. *Veneridae*, pl. 139. figs. 41, 43; *Reeve*, *l. c.* xiv. pl. i. fig. 1; *Roemer*, *Monogr. Cytherea*, pl. 52. figs. 1a-1i.

Sullivan Island. *Red Sea*, *Seychelles*, *Coromandel*, *Ceylon*, *Nicobars*, *Singapore*, *Moluccas*.

344. CIRCE SULCATA, *Gray*, *Reeve*, *Conch. Icon.* xiv. pl. iv. fig. 16b; *Roemer*, *Cyth.* pl. 57. fig. 2.

*Circe plebeia*, *Hanley*, *Sow. Thes. Ven.* figs. 33-37; *Reeve*, *loc. cit.* fig. 17. Sullivan Island, 4 fathoms. *Java*, *Philippines*.

345. CIRCE (CRISTA) DIVARICATA, *Chemnitz*, *Conch.-Cab.* vii. fig. 316; *Sowerby*, *Thes.* fig. 12; *Reeve*, *l. c.* xiv. pl. vi. fig. 23; *Roemer*, *loc. cit.* pl. 49. fig. 1, pl. 51. fig. 5.

King Island, in pools on mud-banks exposed at spring-tides; Elphinstone Island. *Red Sea*, *Zanzibar*, *Bombay*, *Salang*, *Singapore*.

346. CIRCE (CRISTA) GIBBA, *Lam.*, *Chemnitz*, *Conch.-Cab.* vii. figs. 415, 416; *Sow. Thes.* pl. 137. figs. 4-7; *Reeve*, *l. c.* xiv. pl. v. fig. 21, c, d; *Roemer*, *loc. cit.* pl. 47. fig. 2.

Elphinstone Island. *Seychelles*, *Ceylon*, *Nicobars*, *Singapore*, *Philippines*, *New Caledonia*.

347. CYTHEREA (CALLISTE) FESTIVA, *Sow. Thes.* fig. 72; *Reeve*, *l. c.* xiv. *Dione*, pl. i. fig. 2; *Roemer*, *loc. cit.* pl. 17. fig. 3.

Mergui, only very young specimens. *Moluccas*.

348. CYTHEREA (CARYATIS) RUFESCENS, *Gray*, *Reeve*, *l. c.* xiv. *Dione*, pl. vii. fig. 26; *Roemer*, *loc. cit.* pl. 31. fig. 1.

Mergui, mud-flats. *Philippines*.

349. CYTHEREA (CARYATIS) ALABASTRUM, *Reeve*, *l. c.* xiv. *Dione*, pl. x. fig. 42; *Roemer*, *loc. cit.* pl. 25. fig. 2.

King Island †.

350. CYTHEREA (CARYATIS) INDECORA, *Philippi*, *Abbild.* Cyth. pl. 9. fig. 7; *Roemer*, *loc. cit.* pl. 24. fig. 1.

Sullivan Island, 2-7 fathoms. *Mergui* (*Philippi*).

351. CYTHEREA (CARYATIS) MINUTA, *Koch*, *Philippi*, *Abbild.* Cyth. pl. 3. fig. 8; *Roemer*, *loc. cit.* pl. 33. fig. 1.

Sullivan Island, 2-7 and 7-10 fathoms; Kisseraing †.

352. ARTEMIS EXCISA, *Chemnitz*, *Conch.-Cab.* vii. figs. 400, 401; *Sow. Thes. Ven.* fig. 69; *Reeve*, *l. c.* vi. pl. vii. fig. 43; *Roemer*, *Monogr. Dosinia*, pl. 4. figs. 2-4.

Sullivan Island, 7 fathoms. *Nicobars*.

353. VENUS (ANAITIS) CALOPHYLLA, Jonas, *Archiv f. Naturgeschichte*, 1836, pl. 8. fig. 2; Sowerby, *Thes. Ven.* fig. 176; Reeve, l. c. xiv. pl. xxiii. fig. 114.

Laloon Bay, Elphinstone Island. *China Sea.*

354. VENUS (ANTIGONA) RETICULATA, L., Lister, *Hist. Conch.* pl. 335. fig. 172, "cardine croceo;" Chemnitz, vi. figs. 382, 383; Sow. *Thes.* figs. 11-13; Reeve, l. c. xiv. pl. x. fig. 34.

Venus corbis, Lam.

Recognizable by the orange-coloured hinge-teeth.

Mergui; Owen Island. *Red Sea, Moluccas, Philippines, Viti Islands.*

355. VENUS (ANTIGONA) CRISPATA, Desh., Reeve, l. c. xiv. pl. ix. fig. 31.

Venus cancellata, Chemnitz, vi. figs. 304, 305.

Venus Listeri, var., Sowerby, *Thes.* fig. 7.

King Island. *Mauritius, Zanzibar.*

356. VENUS (TIMOCLEA) ARAKANENSIS, Nevill, *Journ. As. Soc. Bengal*, 1871, vol. xl. p. 10, pl. 1. fig. 16.

Sullivan Island, 6 fathoms. *Arakan.*

357. VENUS (TIMOCLEA) IMBRICATA, Sow. *Thes.* pl. 156. figs. 81, 82; Reeve, l. c. xiv. pl. xxiv. fig. 118.

King Island; Elphinstone Island. *China Sea.*

358. VENUS (TIMOCLEA) SCABRA, Hanley, *Catal. Rec. Bivalv.* pl. 16. fig. 24; Sow. *Thes.* figs. 101, 102; Reeve, l. c. xiv. fig. 97.

Elphinstone Island, sand-flat; Sullivan Island, 7-10 fathoms. *Philippines, Australia* (Reeve).

These three species are all nearly allied to one another, and are of small size, and with knotty ribs: in *V. imbricata* the radial ribs are rather few and of a rusty yellow colour, with large smooth interstices; in *V. scabra* the ribs are more crowded, unequal, and crossed by narrow, thin, rather distant concentric laminæ; in *V. arakanensis* densely granulated concentric ribs prevail in the midst of the shell, and only on both extremities are radial ribs distinctly expressed.

Also *V. cochinchinensis*, Sow. *Thes.* figs. 79, 80, is very nearly allied to this species.

359. VENUS (CRYPTOGRAMMA) SQUAMOSA, L., Rumph. *Ambioinsche Rariteit-Kamer*, pl. xliv. fig. M.

Elphinstone Island. *Singapore.*

360. TAPES TEXTRIX, *Chemnitz, Conch.-Cab.* vii. fig. 442.  
 Venus textile, *Gmelin, Sow. Thes. Ven.* fig. 26; *Reeve, Conch. Icon.* xiv. Tapes, pl. ii. fig. 3.  
 Nearly smooth, shining.  
 Sullivan Island, 4 fathoms, large specimen. *Malabar, Ceylon, Malacca, Moluccas.*

361. TAPES UNDULATUS, *Born, Reeve, l. c. xiv. pl. iii.* fig. 8; *Roemer, loc. cit. pl. 5.* fig. 2.  
 Venus rimosa, *Philippi, Abbild. pl. 7.* fig. 7.  
 Surface of the shell marked with narrow deep lines somewhat oblique to the lines of growth. General outlines like *T. textrix*.  
 Sullivan Island, 7 fathoms. *Philippines, Hongkong, Japan.*

362. TAPES AMABILIS, *Philippi, Abbild. Venus, pl. 7.* fig. 2; *Reeve, l. c. xiv. pl. v.* fig. 21; *Roemer, Monogr. Venus, pl. 7.* fig. 1.  
 Deep concentric furrows.  
 Sullivan Island, 2–7 fathoms. *China Sea.*

363. TAPES EXARATUS, *Philippi, Abbild. pl. 5.* fig. 6; *Roemer, loc. cit. pl. 8.* fig. 2.  
 Very near the preceding; the furrows more crowded.  
 Sullivan Island, 4 fathoms. *Red Sea?, Canton.*

364. TAPES LITERATUS, *L., var. NOCTURNUS, Chemnitz, Conch.-Cab.* vii. figs. 434, 435; *Sow. Thes.* fig. 45; *Reeve, l. c. xiv. pl. i.* fig. 2c; *Roemer, loc. cit. pl. 12.* figs. 1b, 1d, 1e.  
 Elphinstone Island. *Moluccas.*

365. TAPES QUADRIRADIATUS, *Desh., Reeve, loc. cit. pl. ii.* fig. 6; *Roemer, loc. cit. pl. 18.* fig. 2.  
 King Island; Laloon Bay, Elphinstone Island. *Salang, Singapore, Moluccas.*

366. TAPES VARIEGATUS, *Sow. Thes.* figs. 133, 136, 137, 138; *Reeve, l. c. xiv. pl. xii.* fig. 64; *Roemer, loc. cit. pl. 26.* fig. 2.  
 Very near to the European *T. decussatus*, *L.*; but generally smaller, of a more reddish hue, and inside bright red.  
 Owen Island. *Salang.*

367. TAPES MALABARICUS, *Chemnitz, vi.* figs. 324, 325; *Sow. Thes.* figs. 6–8; *Reeve, l. c. xiv. pl. vi.* fig. 27; *Roemer, loc. cit. pl. 10.* fig. 3.  
 Venus gailus, *Spengler, Gmelin.*

Mergui ; King Island ; Sullivan Island, 6 fathoms. *Malabar, Ceylon, Bintang, Hongkong.*

Var. *SINUOSUS*, *Lam.* (*Venus*), *Sow.* fig. 10 ; *Reeve*, *l. c.* xiv. Tapes, pl. v. fig. 18 ; *Roemer*, pl. 11. fig. 1.

The hinder part of the shell abbreviated and somewhat distorted. Rather large, 77 millim. in length, 53 high, 43 in diameter.

King Island Bay. *Salang.*

368. TAPES (HEMITAPES) STRIATUS, *Chemnitz*, vi. figs. 365, 366 ; *Sow. Thes.* Ven. figs. 207 & 213 ; *Reeve*, *l. c.* xiv. Tapes, pl. ix. fig. 45.

Elphinstone Island. *Nicobars, Singapore, Philippines, China Sea.*

369. TAPES (HEMITAPES) LATERISULCUS, *Lam. Nat. Hist. Anim. s. Vert. ed. 2*, vi. p. 361 ; *Sow. Thes.* figs. 67-76.

Tapes marmoratus (*Lam.?*), *Reeve*, *l. c.* xiv. pl. vi. fig. 26.

*Venus intuspunctata*, *Anton Philippi, Abbild.* pl. 5. fig. 7.

In younger specimens both the anterior and the posterior extremities of the shell are marked with deeply-cut lines; the middle part, on the contrary, is nearly smooth ; in larger shells, of a length of about  $13\frac{1}{2}$  centim. and upwards, the hinder extremity is smooth and the deep lines are limited to the anterior end.

King Island and Elphinstone Island. *Bombay, Ceylon, Mergui, Salang, Philippines.*

370. TAPES (HEMITAPES) CEYLONENSIS, *Sow. Thes.* figs. 24, 25 ; *Reeve, Conch. Icon.* xiv. pl. vii. fig. 30.

Smooth, shining, very convex.

King Island ; Elphinstone Island. *Red Sea, Ceylon, Salang.*

371. CYPRICARDIA VELICATA, *Reeve, l. c. i.* pl. ii. fig. 7.

King Island, littoral ; Crow Islet, between Padaw and Hayes Islands ; Elphinstone Island Bay ; Sullivan Island. *Philippines.*

372. LITHOPHAGELLA CORALLIOPHAGA, *Chemnitz*, x. figs. 1673, 1674 ; *Reeve, l. c. i.* Cypricardia, pl. ii. fig. 12.

King Island. *Red Sea, Mauritius, Polynesia.*

#### TELLINIDÆ.

373. SEMELE (AMPHIDESMA) SINENSIS, *Gray, Reeve, l. c.* viii. Amphidesma, pl. v. fig. 28.

King Island, mud-banks exposed at spring-tide; Laloon Bay, Elphinstone Island. *China.*

374. SEMELE (AMPHIDESMA) VESTALIS, Adams, *Reeve, Conch. Icon.* viii. Amphidesma, pl. vi. fig. 38.

King Island. *China Sea.*

375. MESODESMA (PAPHIA) GLABRATUM, Lam. *Encycl. Méth.* pl. 257. fig. 3; *Reeve, l. c.* viii. pl. iii. fig. 20.

King Island and Owen Island, sand. *Red Sea, Mauritius, Mozambique, Seychelles, Salang, Singapore, Philippines, Australia.*

376. MESODESMA AEQUILATERUM, E. Roemer, *Malakozoologische Blätter*, 1862, p. 136. (Pl. XVI. fig. 6 a, b.) Testa transverse oblonga, subaequilatera, concentrica striatula, periostraco fulvo tecta, extremitate utraque rotundata, margine ventrali recto, antico paulum magis ascendentem, verticibus in  $\frac{3}{7}-\frac{1}{2}$  longitudinis sitis, sinu palliari usque in medium fere testam elongato. Long. 38, alt.  $20\frac{1}{2}$ , crass. 12 millim.

King Island, beneath stones at highest water-mark; Elphinstone Island; Allen Island. *Salang.*

377. MESODESMA (DAVILA) PLANUM, Hanley, *Reeve, l. c.* fig. 16. Elphinstone Island; Owen Island, sand. *Philippines.*

378. MESODESMA (DAVILA) CRASSULUM, Desh., *Reeve, l. c.* fig. 26.

Very near the preceding, of about the same triangular outline, but not so very flat, and marked with a pale reddish median ray in white; whereas *M. planum* is uniformly horn-coloured.

Elphinstone Island †.

379. TELLINA PERPLEXA, Hanley, *Proc. Zool. Soc.* 1844, p. 149; Roemer, *Monogr. Tellina in Küster's Conch.-Cab.* pl. 14. figs. 4-6.

*T. ostracea* (Lam.?), Hanley, Reeve, *Conch. Icon.* xvii. fig. 124, is scarcely different, but comparatively a little shorter behind. Also *T. siamensis*, Martens, *Proc. Zool. Soc.* 1860, p. 20, is nearly allied, but larger, with more horizontal dorsal margins.

King Island; Sullivan Island, 4 fathoms. *Seychelles, Ceylon, (Siam), Philippines, Moluccas.*

380. TELLINA (ARCPAGIA?) CASTA, Hanley, *Reeve, loc. cit.* xvii. pl. xlvi. fig. 269.

Allied to the European *T. balauistica*, L., but purely white. Sullivan Island, 7 fathoms. *Singapore.*

381. TELLINA (MACALIA) BRUGUIEREI, *Hanley, Sowerby, Thesaur.*  
fig. 193; *Reeve, l. c. xvii. pl. xxx. fig. 165*; *Roemer, pl. 50.* figs. 6-9.  
King Island. *Singapore.*

382. TELLINA (ANGULUS) LANCEOLATA, *Chemnitz, vi. fig. 103*;  
*Sow. Thes.* figs. 86, 87; *Reeve, l. c. xvii. pl. iv. fig. 13.*  
*Psammobia pellucida, Lam., Delessert, Recueil, pl. 5. fig. 10.*  
*Kisseraing Island. Moluccas.*

383. TELLINA (TELLINIDES) EMARGINATA, *Sow. Thes.* fig. 70;  
*Reeve, l. c. pl. xx. fig. 99*; *Roemer, pl. 36. fig. 1.*  
Sullivan Island, 7-10 fathoms. *Singapore.*

TELLINA (MACOMA) BIRMANICA. See above, p. 174, no. 67.

384. PSAMMOBIA BIPARTITA, *Philippi, Zeitschr. f. Malakoz.*  
1848, p. 166; *Chemnitz, Conch.-Cab. vi. fig. 92* (*Tellina truncata,*  
*Linné?*).

*Psammobia cærulescens, Reeve, l. c. x. pl. viii. fig. 60* (not *P. cærulescens*  
of Lamarck, which is identical with *P. tripartita*, Desh., *Reeve, l. c. pl. iii.*  
*fig. 20*).

Sullivan Island, 4 fathoms. *Ceylon, Moluccas, Philippines.*

385. ASAPHIS DEFLORATA, *L., Chemnitz, Conch.-Cab. vi. fig. 83.*  
*Capsa rügosa, Lam., Reeve, l. c. x. pl. i. fig. 1.*

A very large specimen from Elphinstone Island measures 54  
millim. in length, 42 millim. in height, and 29 millim. in diameter.

King Island; Elphinstone and Owen Islands. *Red Sea,*  
*Zanzibar, Mauritius, Seychelles, Salang, Singapore, Java, Timor,*  
*Moluccas, Tahiti.*

386. SOLETELLINA ACUMINATA, *Desh., Reeve, l. c. x. pl. iii.*  
*fig. 12.*

Hinder part of the shell long, produced.

King Island. *Philippines.*

387. SOLETELLINA TUMENS, *Desh., Reeve, l. c. x. pl. iv. fig. 20.*  
Outlines oval, hinder part rounded.

King Island, sand; Elphinstone Island; Allen Island. *Phi-*  
*lippines.*

#### MACTRIDA.

388. MACTRA DECORA, *Desh., Reeve, l. c. viii. pl. xvi. fig. 80.*

With purple-violet rays.

Sullivan Island †.

389. MACTRA ATTENUATA, Desh., Reeve, l.c. viii. pl. xviii. fig. 97. Very inequilateral; outline like that of some species of *Venus*. Elphinstone Island. *Madras*.

390. MACTRA (MACTRINULA) ANGULIFERA, Desh., Reeve, l.c. viii. pl. xvi. fig. 83.

Sullivan Island, 2-7 fathoms; Owen Island, sand. *Philippines*.

391. LUTRARIA (MEROPE) NICOBARICA, Gmelin. (Pl. XVI. fig. 7 a, b.)

Mactra rugosa Indiæ orientalis, Chemnitz, Conch.-Cab. vol. vi. p. 238, pl. 24. fig. 237.

*Mya nicobarica*, Gmelin, Linné, Syst. Nat. ed. 13, p. 3221.

Mactra reticulata, Spengler, Skrivter af Naturhist. Selskab. Copenhagen, vol. v. pt. 2, 1802, p. 119.

Lutraria Chemnitzii, Philippi, Zeitschrift für Malakozoologie, v. 1849, p. 26.

Testa ovato-oblonga, tenui, stramineo-albida, costulis radiantis numerosis, interstitia non æquantibus excavata, extremitate utraque rotundata, antica altiore, costulis obsolescentibus, postica striis capillaribus obliquis sculpta; verticibus ad  $\frac{2}{3}$  longitudinis sitis. Long. 27 millim., alt. 18, crass. 10.

Very near *L. ægyptiaca* (Chemnitz ?), Hanley, Reeve, Conch. Icon. viii. Mactra, fig. 112, and *L. capillacea*, Desh., Reeve, l.c. Mactra, fig. 117; but distinctly less inequilateral. This species attains a larger size than above indicated, a specimen in the Berlin Museum, locality unknown, being 44 millim. long and 29 high.

King Island, mud-bank exposed at spring-tide. *Nicobars*.

LUTRARIA ELONGATA, Gray. See before, p. 174, no. 68.

#### CORBULIDÆ.

392. CORBULA TUNICATA, Hinds, Voy. of the 'Sulphur,' Zool. pl. 20. fig. 45; Reeve, l.c. ii. pl. i. fig. 5.

Hinder part produced into a narrow beak.

Sullivan Island, 7-10 fathoms. *Agulhas Bank*, *Macassar*, *Philippines*.

393. CORBULA CRASSA, Hinds, loc. cit. pl. 20. figs. 1-3; Reeve, Conch. Icon. ii. pl. i. fig. 8.

Very near the preceding, but the hinder extremity more rounded.

Owen Island. *Malacca*, *Philippines*.

## SOLENIDÆ.

394. AULUS WINTERIANUS, *Dunker, Zeitschr. f. Malakozool.* 1852, p. 57, *Novitates*, pl. 39. figs. 8, 9; *Reeve, l. c. xix.* *Cultellus*, pl. 5. fig. 10b.

*Leguminaria alba, Valenc. in Hombron & Jacquinot, Voy. au Pôle Sud, Moll.* pl. 26. fig. 6. (This name may be older, but the date of the publication of the plate is not ascertained; the letterpress is later, 1854.)

Sullivan Island, 7-10 fathoms; and King Island. *Java, Borneo.*

395. CULTELLUS SUBELLIPTICUS, *Dunker, Proc. Zool. Soc.* 1861, p. 421; *Reeve, l. c. xix.* pl. ii. fig. 9.

King Island. *Salang, Malacca, Java, Singapore.*

## PHOLADIDÆ.

396. PHOLAS (MARTESIA) STRIATA, L., *Chemnitz*, viii. figs. 867-871; *Sowerby, Thes.* figs. 40-42; *Reeve, l. c. xviii.* pl. viii. fig. 32.

King Island, on drift-timber. *Singapore, China Sea, also in the Atlantic.*

397. PHOLAS (PARAPHOLAS) QUADRIZONATA, *Spengler, Skrivter af Naturhist. Selskab. Copenhagen*, vol. ii. 1792, pl. 1. figs. 1-4; *Reeve, l. c. xviii.* pl. ix. fig. 38.

Sullivan Island, a single valve. *Torres Strait.*

TEREDO THORACITES. See above, p. 174, no. 69.

The Tenasserim coast having been explored for shells by the naturalists Philippi and Gould, no striking novelties in this department could be expected. Nevertheless, the present collection is one of considerable interest. The occurrence of several species known hitherto only from the Philippines, from Java, or from Ceylon, tends to prove that very few marine species are confined to only one locality; and that the large number of such species in our systematic catalogues is due only to the want of careful researches in other places. Some species, for which no exact locality was hitherto known, are here for the first time found to be inhabitants of the Indian Ocean. Generally, most of the sea-shells are widely distributed throughout the Indian Ocean, many species extending from the east coast of Africa to the

Moluccas, and even to Polynesia, many of which were well known to the early conchologists of the ante-Linnean period ; and of these we find a large number also on the Tenasserim coast. Others appear to be confined to that part of the Indian Ocean which includes the Andamans, Nicobars, and the Tenasserim coast ; some of them were known to the older Danish conchologists (Chemnitz, Spengler ; the Nicobars being a Danish possession at the close of the last century), but are still rare in collections, e. g. *Pholas quadrizonalis*.

The statements concerning the occurrence at low-water, on mud-flats, on mangrove-trunks, &c., yield many hints concerning the relations of the shapes and colours of the shells to their peculiar habitats, which will be very acceptable to most conchologists. It is also very remarkable that some species, unanimously considered as marine, e. g. *Nerita lineata* and *Columbella Duclosiana*, have been found associated in brackish water with others generally regarded as freshwater shells, e. g. *Neritina crepidularia* ; and that some species of *Neritina*, such as *N. ualensis*, have been found alike in fresh and in brackish waters. This proves that the distinction between freshwater and marine species is in some families not so well defined as has been generally surmised.

#### DESCRIPTION OF THE PLATES.

##### PLATE XIV.

Figs. 1-6. *Cyclophorus aurantiacus*. 1, 2, var. *a*, *typicus*; 3, 4, var. *b*, *pernobilis*; 5, 6, subvar. *bb* (*paulo minor*).

##### PLATE XV.

Figs. 1-6. *Cyclophorus aurantiacus*. 1, 2, var. *c*, *Nevilli*; 3, 4, var. *d*, *Reevei*; 5, 6, var. *e*, *Andersoni*.

Figs. 7, 8. *Cyclophorus expansus*.

Fig. 9. *Cyclophorus zebrinus*, var. *c*, *ambiguus*.

##### PLATE XVI.

Fig. 1, *a*, *b*, *c*. *Nassa Thersites*, var. *acypha*.

Fig. 2. *a-f*. *Littorina rubropicta*, n. sp.

Fig. 3, *a-e*. *Isanda pulchella*.

Fig. 4, *a-d*. *Mytilus (Aulacoma) curvatus*.

Fig. 5, *a*, *b*, *c*. *Mytilus (? Septifer) Andersoni*, n. sp.

Fig. 6, *a*, *b*. *Mesodesma æquilaterum*.

Fig. 7, *a*, *b*. *Lutraria (Meropé) nicobarica*.



Prof. E. von Martens

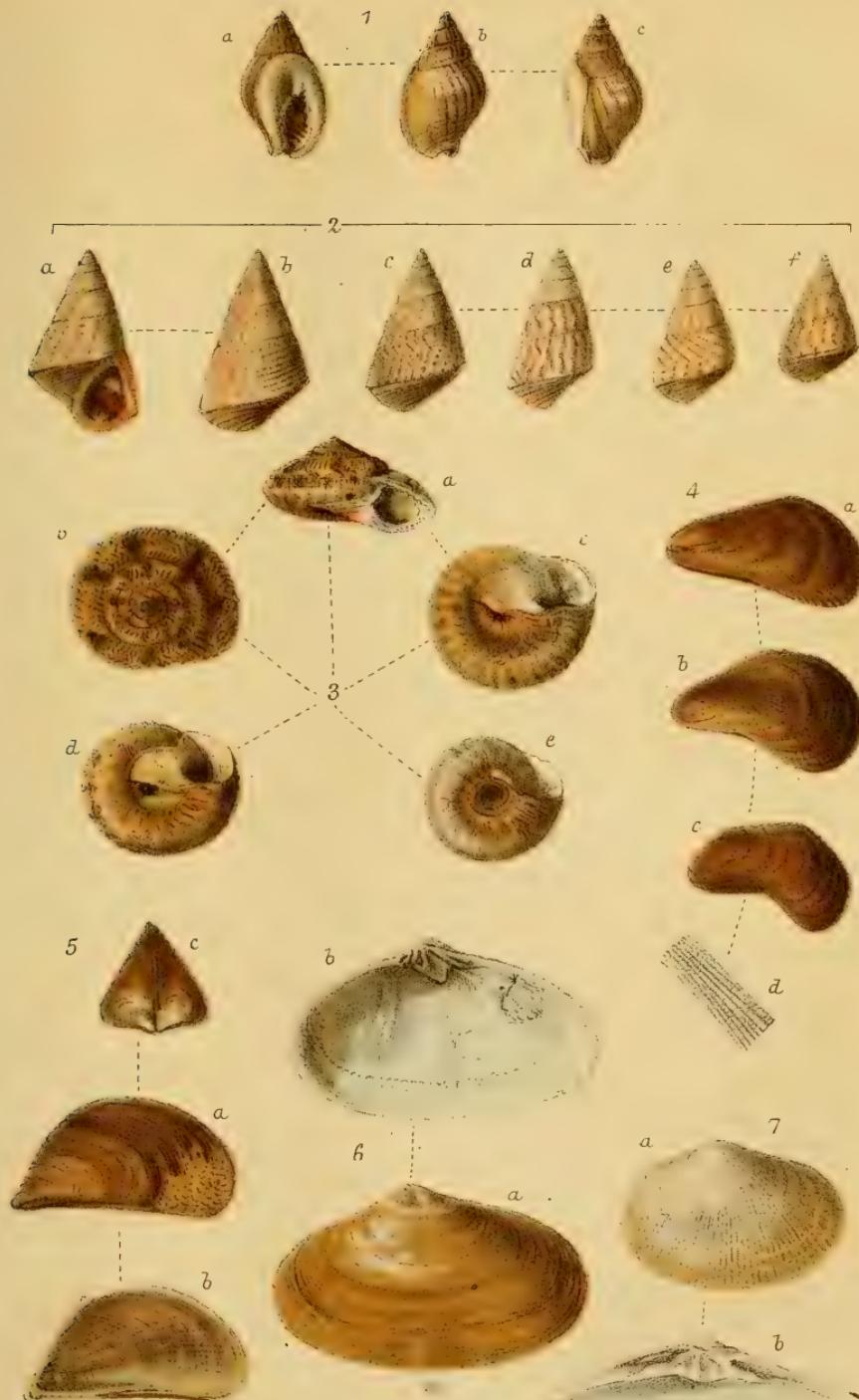


Prof. E. von Martens

Le Duran del

1-6 CYCLOPHORUS AURANTIACUS var.  
7, 8. C. EXPANSUS 9. C. ZEBRINUS var. AMBIGUUS

West, Newman, Chromolith.



E. Dival, del.

Prof. E. von Martens.

West, Newman, Garamond &amp; Co.

1 a-c, *NASSA THERSITES* var. 2 a-f, *LITTORINA RUBROPICTA*.  
 3 a-e, *ISANDA PULCHELLA*. 4 a-d, *MYTILUS CURVATUS*. 5 a-c, *MYTILUS ANDERSONI*.  
 6 a-b, *MESODESMA AEQUILATERUM*. 7 a-b, *LUTPARIA NICOBARICA*.